DISENROLLMENT EXPERIENCE IN THE MEDICARE HMO AND CMP RISK PROGRAM: 1985 TO 1988

FINAL REPORT

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EXECUTIVE SUMMARY

The purpose of this report is to provide Congress with information concerning Medicare beneficiaries' disenrollment from Health Maintenance Organizations (HMOs) and Competitive Medical Plans (CMPs) holding risk contracts under section 1876 of the Social Security Act. The analyses for this report are limited to risk based HMOs because only risk contracts "lock-in" enrollees to receiving benefits through their HMO/CMP and only risk contracts were affected in significant ways by the changes made in the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA), which included the requirement for a study of Medicare beneficiary disenrollment from HMOs and CMPs.

Rates of beneficiary disenrollment from Medicare risk contract HMOs and CMPs were examined for the period April 1, 1985, through July 31, 1988. The analysis focused on disenrollment patterns and on the factors that are associated with Medicare beneficiaries' decisions to terminate their membership in an HMO. The intent was to gain an understanding of the relationship between disenrollment patterns and the factors which influence the decision to disenroll. We were also interested in how patterns of disenrollment might be used to oversee the Medicare risk HMO/CMP program. To that end answers to the following specific questions pertaining to disenrollment were sought:

1. To what extent do disenrollment rates vary across individual risk plans?
2. Where do beneficiaries seek care after disenrolling from a risk HMO/CMP?
3. What types of HMOs and CMPs have higher -- or lower -- disenrollment rates?
4. How have disenrollment rates changed between 1985 and 1988?
5. Are there regional differences in disenrollment rates?
6. In markets with multiple HMOs, to what extent is disenrollment an indicator of competition among risk plans?
7. Is there an association between quality of care indicators and disenrollment rates?

An interim report to Congress on disenrollment from risk HMOs and CMPs was submitted to Congress on August 11, 1987. The findings presented in that report were based on data drawn from a number of existing studies of disenrollment from Medicare HMOs, including the Health Care Financing Administration's (HCFA) evaluation of the Medicare competition demonstrations. The results presented in this final report are similar to those of the evaluation of the demonstrations. However, the current findings are based on a much larger number of HMOs and beneficiaries. The following are the key findings from this analysis of 109 risk HMOs and CMPs with a combined total enrollment, between April 1985 and July 1987, of more than 830,000 Medicare beneficiaries:

- Overall, 7 percent of enrollees had disenrolled within the first 3 months after enrolling, 12 percent had disenrolled by 6 months, 20 percent had disenrolled within 1 year, and 33 percent disenrolled within 2 years of enrolling.
- In 1985 and 1986, the percentage of disenrollees switching to other risk plans was 27 percent, rising to 33 percent in 1987. Disenrollees to other HMOs, rather than to fee-for-service, tended to be younger, institutionalized, black, or male.
- Disenrollment rates were higher for older beneficiaries, those entitled due to disability, those who were Medicaid eligible, and black beneficiaries.
- Disenrollment rates generally were higher for Network/Mixed HMOs (HMOs with elements of both the independent practice association (IPA) model and group model), for-profit HMOs, and those not affiliated with a chain.
- Disenrollment rates were higher in areas with multiple HMOs.
- Disenrollment was higher for those plans in which enrollees expressed less satisfaction with their perception of the quality of the HMOs' services (based on survey data from the Medicare Competition Demonstration).

These findings may be useful for future oversight of the risk HMO/CMP program. Based on these findings, the following conclusions were drawn:

- Disenrollment rates may be of value as an indicator of changes in the quality of care provided by individual HMOs.
- Because it appears that a significant proportion of Medicare beneficiaries will disenroll from risk HMOs/CMPs within 2 years of enrollment, there is a need to study the implications of disenrollment patterns for HMO payment policy.
- Greater efforts on the part of HMOs are needed to ensure that potential enrollees fully understand all aspects of the particular HMO's health care delivery system, including the restriction to certain providers (i.e., the "lock-in" provision).
- The risk HMO/CMP program appears to have increased competition in the Medicare market; and disenrollment to join other HMOs is an indicator of Medicare beneficiaries' willingness to choose among options, when available.

I. INTRODUCTION

A. OVERVIEW

The purpose of this final report is to provide information to Congress on disenrollment of Medicare beneficiaries from Health Maintenance Organizations (HMOs) and Competitive Medical Plans (CMPs) holding risk contracts under section 1876 of the Social Security Act, as amended by P.L. 97-248.

Under section 1876 of the Social Security Act, the Department of Health and Human Services may enter into contracts with health maintenance organizations (HMOs) or competitive medical plans (CMPs) to provide services to Medicare beneficiaries on a prepaid, capitated basis. Payment under these contracts may be made in either of two ways. Under a "risk contract," payment is based on a prospectively calculated rate which is not adjusted at the end of the year, and the HMO/CMP retains any profits and absorbs any losses. Under a "cost contract," payment is based on the reasonable cost of the services, with a year end reconciliation.

Section 114 (e) of the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA) fundamentally altered the provisions governing risk based contracts but left rules for cost contracts unchanged. Section 114 (e) also directed that:

> "The Secretary of Health and Human Services shall conduct a study evaluating the extent of, and reasons for, the termination by Medicare beneficiaries of their memberships in organizations with contracts under section 1876 of the Social Security Act. . . . [T]he Secretary shall place special emphasis on the quantity and quality of medical care provided in such organizations and the quality of such care when

> provided on a fee-for-service basis. The Secretary shall submit an interim report to the Congress, within two years after the initial effective date (as defined in subsection (c)(4)) [February 1,1985], and a final report within five years after such date containing the respective interim and final findings and conclusions made as a result of such study."

This report is focused on disenrollment from risk contracts because only risk contracts were affected in significant ways by the changes made in TEFRA and only risk contracts "lock-in" enrollees (meaning that Medicare will not pay for any services which are not received or authorized through the HMO/CMP). Beneficiaries enrolled in cost contracts may continue to use services outside the HMO/CMP and be reimbursed under fee-for-service Medicare. Therefore, disenrollment from risk HMOs/CMPs is a more relevant issue to Congress, the Health Care Financing Administration (HCFA), the HMO industry, and Medicare enrollees. It can be viewed as an indicator of beneficiaries' perception of the quality of care being provided by the HMO and of the effectiveness of the HMO and HCFA in ensuring that Medicare beneficiaries are well-informed about their options under Medicare.

Medicare beneficiaries who disenroll may experience discontinuity of care. They also may become liable for substantial out-of-pocket costs during their transitional periods, if they have changed physicians to join the HMO and cancelled their previous Medicare supplemental insurance arrangements. This disruption may adversely affect the overall quality of care that these beneficiaries obtain during this period.

In this report, we present disenrollment rates from risk HMO/CMPs for the period April 1, 1985, through July 31, 1988. Several issues are addressed from the perspective of understanding the patterns of disenrollment that are observed and the implications of disenrollment patterns for assessing and monitoring the risk HMO/CMP program.

The disenrollment analysis focused on providing answers to the following specific questions:

1. To what extent do disenrollment rates vary across individual plans?
2. Where do beneficiaries seek care after disenrolling from a risk HMO/CMP?
3. What types of HMOs and CMPs have higher -- or lower -- disenrollment rates?
4. How have disenrollment rates changed between 1985 and 1988?
5. Are there regional differences in disenrollment rates?
6. In markets with multiple HMOs, to what extent is disenrollment an indicator of competition among plans?
7. Is there an association between quality of care indicators and disenrollment rates?

Additional research is underway within the Health Care Financing Administration (HCFA) to address other issues related to disenrollment patterns. Of particular interest is the relationship between Medicare beneficiaries' use of services while enrolled and the probability of disenrollment. Much of this research relies upon availability of "hospital no-pay bills" filed on behalf of Medicare

HMO/CMP enrollees. Prior to fall 1988, the no-pay bills (so named because they allow HCFA to track utilization and compute remaining deductibles - but not used for HMO payments) were being submitted erratically. New regulations requiring hospitals to submit these bills are expected to substantially increase compliance and make it possible to monitor hospital use and disenrollment patterns on a timely basis and to provide information on this issue in the future.

B. DISENROLLMENT AS AN INDICATOR OF PROGRAM PERFORMANCE

The success of the risk program is dependent upon the ability of HMOs in the Medicare market to attract and retain Medicare beneficiaries. While beneficiaries' enrollment decisions may be heavily influenced by financial considerations and the attractiveness of the HMO benefit package, to retain these enrollees in prepaid arrangements the HMOs must provide services in ways that satisfy Medicare beneficiaries. Although it is important that HMOs provide satisfactory care to both their Medicare and non-Medicare enrollees, it is particularly important with respect to the Medicare HMO enrollee population, since Medicare enrollees are permitted to disenroll from their HMO at any time (with their disenrollment becoming effective on the first day of the following month). Thus, they can quickly react to dissatisfaction with their plan. In contrast, most non-Medicare HMO enrollees may disenroll only once per year, when their employers schedule an open enrollment period.

Disenrollment patterns also may provide an indicator for monitoring HMOs in the Medicare program. For example, if monitoring detected systematic disenrollment by potentially high users of health services, it could be an indication that the HMO's case management approach is not satisfactory to some Medicare beneficiaries with significant health problems or an indication that some HMOs were actively encouraging these potentially high-cost patients to disenroll. Either of these scenarios could leave HMOs with a healthier-than-average mix of enrollees, resulting in overpayment to Medicare HMOs. (HCFA's payment system assumes that the health status and use patterns of an HMO's enrollee group is average - after adjustment for age, sex, institutional status, and welfare status.)

An interim report to Congress on disenrollment, submitted to Congress on August 11, 1987, was based upon data from a number of existing studies of disenrollment from Medicare HMOs, including the findings from the evaluation of the Medicare Competition Demonstrations (26 risk HMOs that operated as demonstrations of the TEFRA risk contracting features from 1983 through their conversion to program status in April 1985). From these early studies the following conclusions were drawn:

- There was substantial variation in disenrollment experiences across market areas, with highly competitive areas (e.g., South Florida) having higher disenrollment rates (around 20 percent) and other areas having lower annual disenrollments (around 8 percent) in the first year of the demonstration.
- Beneficiaries' reasons for disenrolling included misunderstanding of the HMO concept (31 percent), a change of residence (9 percent), dissatisfaction with some aspect of the HMO (47 percent), and preference for maintaining a relationship with a specific physician (8 percent).

These findings were based on the experience of only 17 Medicare HMOs that had entered the Medicare market under the early demonstration programs and on a survey of a small number of disenrollees. Consequently, there was reason to believe that these results were not generalizable to the permanent risk program and that, over time, as HMOs became more experienced with serving Medicare beneficiaries, the patterns of disenrollment might change. This early analysis of the disenrollment from the demonstration plans did provide information to HCFA that was useful for developing strategies and approaches to monitoring disenrollment on a continuing basis.

C. CURRENT MONITORING OF DISENROLLMENT PATTERNS

Since July 1988 HCFA has been producing a Monthly HMO Disenrollment Activity Report that is used to monitor HMO and CMP disenrollment patterns. The Monthly Disenrollment Activity Report includes information on the national disenrollment rate across all risk plans, the distribution of all plans by disenrollment rates, disenrollment rates by regions, and the ratio of new enrollments to disenrollments each month. HCFA also prepares "exception" reports, identifying plans with disenrollment patterns that are substantially different from the national average over a 6-month period. The monthly disenrollment reports and the exception reports are intended to be used as one tool within HCFA's larger monitoring framework.

HCFA also has a number of other activities underway to monitor disenrollment rates and provide information for monitoring purposes. An automated system for tracking beneficiaries' complaints, by plan, has been developed and may be used, in conjunction with the Monthly Disenrollment Activity Report, to identify patterns of disenrollment and types of complaints that, together, suggest that a specific HMO or CMP may warrant further attention. In addition, HCFA has designed and is now conducting a pilot survey of disenrollees to obtain information on their reasons for disenrolling, and their experiences while enrolled, as well as demographic and health status information. (The survey instrument is provided in Appendix A.)

Integration of HCFA's Monthly Disenrollment Activity Report data, information from the Beneficiary Information Tracking System, and results of the disenrollment surveys will provide comprehensive data for identifying areas and specific HMO/CMPs that have unusual disenrollment patterns that may warrant closer scrutiny over time.

The analysis presented in this report to Congress may be viewed as a baseline of information on disenrollment from the risk program through mid-1988. Through its ongoing disenrollment reports and studies since mid-1988, HCFA is routinely providing continuous information on the program to the regional offices to enable them to monitor the plans over which they have direct responsibility.

D. ORGANIZATION OF THIS REPORT

This report to Congress on disenrollment provides information on the 1985 through mid-1988 disenrollment experience of Medicare risk HMOs and CMPs. Chapter II presents an overview of the program, a brief discussion of the limited previous research on HMO disenrollment patterns, and a description of data available for studies of risk HMO and CMP disenrollment experiences. The analysis reported in Chapter III provides data on the disenrollment patterns of each HMO and CMP that served Medicare beneficiaries over this period and was continuously in the program through mid-1988. In addition to the HMO-specific disenrollment rates, disenrollment rates are examined for groups of beneficiaries defined by their characteristics and by characteristics of the HMOs to which they belong. To examine the validity of using disenrollment patterns as potential indicators of problems with quality of care, HMOs were rated as either above average or below average in terms of beneficiary satisfaction with quality aspects of HMO performance; the disenrollment rates of the HMOs in each group for each of the measures are presented in Chapter IV. In Chapter V, we present the results of an analysis of disenrollment patterns in markets with multiple plans, which includes a discussion of disenrollment patterns as an indicator of competition in the risk program. The final chapter of this report summarizes and discusses the implications of these analyses.

II. PREVIOUS RESEARCH AND DATA AVAILABILITY

A. BACKGROUND

In January 1985, regulations were published based on section 1876 authority which allowed HMOs and CMPs to serve the Medicare population under risk contracts. By April 1989, 133 HMOs and CMPs participated in the Medicare program, and a total of 1,061,582 Medicare beneficiaries were enrolled in risk HMOs and CMPs. There has been, however, substantial turnover in the program, both of HMOs and of beneficiaries. Of the 156 HMOs and CMPs that had risk contracts by mid 1987 -- the period of the analysis in this report -- 38 had chosen not to renew their risk contracts by July 1988. These nonrenewing plans had enrolled a total of 113,731 Medicare beneficiaries. An additional 20 percent of Medicare beneficiaries who had enrolled in continuing HMOs and CMPs between April 1985 and July 1987 had voluntarily disenrolled within 1 year following enrollment in the program. Perhaps some portion of this 20 percent decided to enroll because the flexibility of the disenrollment option made it possible for them to "try out" an HMO without committing themselves to that particular care provider for a long period of time.

Many of the 113,731 beneficiaries who disenrolled (either voluntarily or involuntarily) from nonrenewing HMOs and CMPs and the 167,080 beneficiaries who voluntarily disenrolled within 1 year following enrollment in continuing plans eventually found themselves needing new Medicare supplemental insurance arrangements and, in some cases, new provider arrangements. Over a quarter of those who voluntarily disenrolled from active risk plans enrolled in another risk HMO or CMP instead of opting for a traditional Medicare supplemental ("Medigap") policy. Of those who were enrolled in nonrenewing HMOs and disenrolled either voluntarily or involuntarily within 24 months of joining, over one third joined another risk HMO or CMP. Thus, disenrollment does not necessarily imply that beneficiaries leave the risk program; rather, a substantial number of disenrollees choose another of the available options for one of a number of reasons, including moving out of the service area of their former HMO or finding another plan that is more attractive.

A recent study examined the reasons why HMOs exit the Medicare market (Tompkins and Porell, 1988); however, the disenrollment behavior of enrollees has not been well documented -- for two reasons:

- The risk program has been in place for a relatively short period of time; and
- The analysis of HMO disenrollment was hampered because of limited available data.

In this report to Congress, we focus on the factors that influence Medicare beneficiaries to voluntarily leave the program. To frame the analysis, we first examine the existing research available on HMO disenrollment patterns for non-Medicare and Medicare demonstration HMOs and CMPs and discuss its limitations in terms of promoting a clear understanding of the current risk program. In the final section of the chapter, we describe the data sources that are available for conducting research on and monitoring HMO/CMP disenrollment, putting particular emphasis on those that are used to conduct the analysis for this report.

B. PREVIOUS RESEARCH

Previous disenrollment studies of the non-Medicare HMO population suggest that HMO disenrollees are healthier and use fewer services than those who remain enrolled, and that the most common reason for disenrollment is the high cost of such comprehensive coverage relative to expected utilization of services (Brown, 1986; Rossiter et al., 1988). These findings may not be indicative of Medicare beneficiaries' particular reasons for disenrolling. Since HMO premiums for Medicare beneficiaries are generally quite low (zero, in some plans) compared with premiums charged for traditional Medicare supplemental insurance policies, the HMO option may be very attractive to low-service users. As a result, healthier Medicare enrollees who use fewer services may have less financial incentive to disenroll than the non-Medicare HMO population, which typically pays higher out-of-pocket premiums for membership. Tight controls on access to care may precipitate the disenrollment of chronically ill Medicare enrollees (i.e., high users).

Prior research on disenrollment patterns has focused on the effect that patient satisfaction has on disenrollment decisions, the impact of disenrollment patterns on biased selection within HMOs, and disenrollment as an indicator of competition in the market for health services. This research is briefly reviewed here, with a focus on the Medicare population. Since most of the studies of Medicare beneficiaries' disenrollment experience draw upon data collected from the demonstration period, a commentary on the usefulness of demonstration research for understanding the ongoing program also is provided.

1. Patient Satisfaction and Disenrollment

During the Medicare competition demonstration evaluation, Mathematica Policy Research surveyed Medicare beneficiaries from 17 demonstration HMOs 3 to 9 months after they enrolled and again 1 year later in order to obtain data on beneficiary choice and satisfaction (Brown et al., 1986 and Rossiter et al., 1988). Of the 1,972 persons interviewed, 15.5 percent disenrolled within 1 year of enrollment. Of those who disenrolled, 47 percent reported some dissatisfaction with the HMO. The most frequently cited reasons for dissatisfaction included: poor medical care (4.9 percent), the unavailability of some service or specialty (4.3 percent), not wanting a different doctor each visit (4.3 percent), and the most often reported reason, inconvenient travel distance (6.5 percent). A multivariate analysis suggested that disenrollment was affected by several factors, including dissatisfaction after using HMO services, retention of private insurance coverage, and the type of HMO joined. This disenrollment study also found that those beneficiaries who disenrolled within 3 months of joining an HMO were most likely to cite misunderstanding of the HMO concept as the reason for disenrollment. Later disenrollees more frequently reported dissatisfaction with the HMO as the primary reason for disenrollment.

Based on his analysis of Medicare beneficiaries enrolled in one HMO, Ward (1987) reported that the best predictor of Medicare enrollee satisfaction with both care and cost is understanding of coverage and procedures. Persons who indicated they felt less knowledgeable also expressed less satisfaction, exhibited greater use of out-of-plan health services, and were more likely to disenroll. In a follow-up study of an HMO's Medicare enrollees, Ward found that 17 percent reported out-of-plan use of health services during the year.

2. Biased Selection and Disenrollment

If beneficiaries who disenroll are either more or less likely than continuing enrollees to be high users of services, disenrollment may have a significant impact on the viability of the HMO and on Medicare program costs. In addition, systematic disenrollment of high users may indicate that HMO case management is not satisfactory for beneficiaries with significant health problems. Thus, monitoring disenrollment trends may detect beneficiary or HMO behavior that leads to biased selection.

Brown (1987) reported that in every one of the 17 plans studied during the evaluation of the Medicare Competition Demonstrations, disenrollees spent more on health care and used health services more frequently prior to joining the HMO than those who remained enrolled. Although most of the differences were not statistically significant (perhaps because of the small number of disenrollees included in the study), the consistency of the direction of the differences and the magnitude of the differences provide evidence that disenrollees use more services than their continuing counterparts (to the extent that prior use is correlated with current use). Also, the degree of favorable selection in disenrollment (measured by Medicare reimbursements prior to enrollment) varied significantly with the type of HMO[1]. Staff models exhibited the greatest differences in prior reimbursements between disenrollees and continuers, and Independent Practice Associations (IPAs) showed the smallest differences.

A study by Ward (1987) provides more evidence supporting the existence of favorable bias (from the HMOs' perspective) in disenrollments among Medicare HMO members. In a 1-year follow-up survey of the members of one HMO, actual disenrollees and those considering disenrollment had lower subjective and functional health ratings and were more likely to report a decline in health during the past year than continuing enrollees. Poor coverage, inconvenience, travel distance, and provider and facility restrictions were the reasons cited for disenrollment.

Wrightson, Genuardi, and Stephens (1987), report somewhat different results, based on enrollees' use of services before disenrollment. Data from four HMOs were analyzed to detect differences between Medicare disenrollees and Medicare enrollees who stayed with the plan, in terms of frequency of use of both inpatient (hospital) and outpatient services. The results were inconclusive: In two plans Medicare disenrollees showed greater use of inpatient services than did continuing members, whereas in the other two plans, disenrollees had lower rates of use of inpatient services than those who continued. In addition, Medicare disenrollees used less outpatient services than continuing members in two out of three plans for which such data were available.

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[1] HMO organizational models include: staff - services are provided by a physician group that is controlled by the HMO; independent practice association (IPA) - the HMO contracts directly with individual physicians or associations of physicians; group - the HMO contracts with one independent group practice to provide services; and network, - the HMO contracts with a number of groups and individual physicians.

3. Disenrollment and Competition

There is some evidence, though limited, that those who disenroll from one HMO in order to enroll in another HMO differ from those who disenroll and return to fee-for-service arrangements in terms of satisfaction and frequency of use.

Rossiter et al. (1988) found that those Medicare beneficiaries who disenrolled to join another HMO exhibited greater understanding of the HMO concept than did Medicare disenrollees who returned to fee-for-service care. The single most often reported reason for switching to another HMO was not related to dissatisfaction, rather, it was the desire to follow a provider who left the original HMO to practice in another (16.4 percent). A desire to see the same doctor at each visit and hearing that another HMO was better were other reasons for disenrollment reported by switchers (9.0 percent). The other frequently reported reason for disenrollment and switching was inconvenient travel distance to the original HMO (7.5 percent). Those who switched HMOs were also found to have lower expected use of services than disenrollees returning to fee-for-service, based on their being less inclined to see a doctor immediately when feeling ill, less likely to report having poor health, and having had significantly lower Part A reimbursements during the 2 years prior to enrollment.

Medicare beneficiaries' movement among HMOs would seem to indicate a willingness on the part of Medicare beneficiaries to "shop" for the best (for them) combination of price, benefits, convenience, and quality in their insurer/delivery system. This implies that, as Medicare beneficiaries become more knowledgeable of HMO options, HMOs and CMPs should recognize that an aspect of competition in the Medicare market is their degree of sensitivity and responsiveness to the specific concerns of Medicare beneficiaries.

C. DATA SOURCES FOR HMO/CMP DISENROLLMENT STUDIES

A brief description of each of the main data sources used for the analyses in this report follows:

1. Group Health Plan Operations (GHPO) File

HCFA maintains enrollment status information on the GHPO master file for all Medicare beneficiaries who have ever been enrolled in an HMO, CMP, or other alternative health plan under a HCFA contract. The current membership status of a Medicare beneficiary is recorded on the GHPO file, as are up to five past enrollment episodes for any given Medicare beneficiary. Therefore, the file contains data on as many as six complete enrollment episodes per individual. The GHPO Master file also includes some demographic and tracking data taken from HCFA's Health Insurance Master Eligibility File.

Since participating HMOs and CMPs must report monthly on new enrollments and disenrollments in order to be paid, the file provides longitudinal data that can be used to examine disenrollment patterns over time within the program. When combined with information maintained by HCFA on risk HMO/CMP market and organizational characteristics, the GHPO file is also useful for examining the effects of competition among plans on disenrollment patterns.

This file provides only limited information on the reasons Medicare beneficiaries disenroll, however. While deaths and disenrollment to join another HMO are discernible from the GHPO data, data on disenrollment due to other reasons (e.g., dissatisfaction with the HMO, relocation) have not been available during the initial years of the program. To address this issue, as discussed earlier, HCFA has initiated a survey of disenrollees from risk HMO/CMPs that is designed to collect information on reasons for disenrollment that can be used for HCFA's ongoing monitoring of the program. While these data are not yet available, and therefore are not presented in this report, they will be available in the future for use in analyzing disenrollment patterns.

The entire GHPO master file covering enrollment episodes through July 1, 1988, has been used for the analyses presented in Chapters III and IV of this report. For the analysis of disenrollment patterns and rates, only risk-based HMOs that were in operation at some time between April 1, 1985, and January 1, 1988, were included in the constructed data base.

2. HCFA's Monthly Status Reports

HCFA's monthly status reports have been prepared for each month since the inception of the risk program (April 1, 1985). The HCFA reports contain information for each risk-based HMO, including plan identification number, model type, profit status, and chain affiliation. The reports were a primary tool by which HMOs were identified that had changed their plan identification number (e.g., if it changed from demonstration status to program status or was sold to new owners); this information is important since the GHPO data show enrollees whose plan has undergone an identification change as having two separate enrollment episodes. Consequently, disenrollment rates associated with an HMO that has changed its plan I.D. number will be overstated. A list of HMOs, along with their plan identification number, starting date, termination date, model type, and chain affiliation is provided in Appendix B.

3. Medicare Competition Demonstration Beneficiary Survey Data

To examine the relationships between disenrollment rates and quality of care indicators (satisfaction with care, access to care), we analyzed data from the survey of beneficiaries who enrolled in Medicare competition demonstration HMOs. The interviews were conducted by telephone between April 1986 and July 1986 for a randomly selected sample of beneficiaries who enrolled in one of the 17 demonstration HMOs. The survey focused primarily upon identifying areas of satisfaction and dissatisfaction with HMO enrollment.

III. DISENROLLMENT PATTERNS AND RATES: 1985 to 1988

A. OVERVIEW

This chapter provides a basic descriptive analysis of the Medicare risk contracting experience during the period April 1985 through July 1988. Since the data encompass a much broader time period and many more HMOs than did the evaluation of the demonstrations, it is now possible to explore the extent to which the earlier findings are consistent with those observed over the extended time period and to determine whether new patterns have emerged. The following results are discussed in this chapter:

- An assessment of the disenrollment experience of individual plans for cohorts of enrollees over time. This analysis provides information on:
    - overall variation in disenrollment rates at different points in time,
    - disenrollees' choices of new health care arrangements (e.g., fee-for-service, new risk HMO), and
    - the extent to which disenrollment increases or decreases with length of time in the HMO.
- An examination of the degree to which disenrollment rates vary by beneficiary characteristics, and trends in 12-month disenrollment rates over time for cohorts by beneficiary characteristics.
- A similar assessment of disenrollment rates by HMO or market characteristics.

B. METHODOLOGICAL ISSUES

In interpreting the analyses in this chapter, it is necessary to understand how disenrollment was measured, how the cohorts were defined, and how the rates were calculated. Each of these issues is addressed below.

1. Measurement of Disenrollment

HMO disenrollment may be measured using one of two basic methods. One approach uses a time-related disenrollment rate (or ratio)[2], while a second approach uses a cohort-based disenrollment rate. The ratio method expresses disenrollments in a given time period as a percentage of total enrollment in that same period, where total enrollment is defined as the sum of enrollment at the start of the period plus new enrollees during the period (i.e., the number of persons who were enrolled for at least 1 month during the time period of interest). The second methodology tracks a cohort of enrollees over time and determines what percentage of them disenroll within a certain length of time after joining.

This cohort approach permits an analysis of the behavior of Medicare beneficiaries over time, their attachment to the HMOs and CMPs they have joined, and the probabilities that beneficiaries will remain in an HMO for specific periods of time -- 3 months, 6 months, 12 months, and 24 months. The 3-month disenrollment rate provided an indication of the extent to which beneficiaries may be joining plans without sufficient information about HMO patterns of service delivery or about specific benefits or restrictions to certain physicians. Disenrollment rates for longer periods indicate the extent of satisfaction over time with the HMO.

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[2] To simplify the discussion in this report, time-related disenrollment rates are referred to as ratios throughout the report.

HCFA calculates monthly disenrollment ratios to provide a timely measure of individual plans' disenrollment experience and to assess whether there appear to be changes in disenrollment patterns within each HMO and within the program. The ratio approach expresses disenrollments in a given time period as a percentage of total enrollment in that same period, where total enrollment is defined as enrollment at the start of the period plus new enrollees during the period (i.e., the number of persons who were enrolled for at least 1 month during the time period of interest). Disenrollment ratios are preferable for short-term monitoring of HMO performance, since they provide a measure of how plans' experiences are changing from month to month. A large jump in disenrollment from one month to the next may indicate problems in the HMO that warrant attention; cohort rates would not detect such problems in the short run. Thus, the ratio approach used by HCFA for monthly monitoring provides a useful management tool, while cohort rates provide insight into the long-term behavior of Medicare beneficiaries who join HMOs and CMPs.

Appendix C to this report provides the specific formulas for both the ratio and cohort rate calculations, as well as a hypothetical comparison of time-related ratios and cohort-based rates to illustrate the implications and uses of each methodology.

2. Cohort Definitions

Two cohorts of Medicare beneficiaries enrolled in risk HMOs and CMPs are used in the analysis described in this chapter:

- All Medicare beneficiaries who enrolled in a risk plan between April 1, 1985, and July 31, 1987 (the full cohort).
- All Medicare beneficiaries who enrolled in a risk plan between April 1, 1985, and July 31, 1986 (the early cohort).

The GHPO file that was used in this analysis provided information on enrollees' HMO membership through July 31, 1988. Therefore, the analysis of the full cohort permits examination of the likelihood that a beneficiary will disenroll within 12 months of enrollment in a risk plan. The analysis of the early cohort permits examination of the likelihood that a beneficiary will disenroll within 24 months of enrollment.

Beneficiaries in the full cohort, for which 12-month disenrollment rates are calculated, are also examined by the year in which they joined the plan -- 1985, 1986, and 1987 enrollees -- in order to determine whether there have been changes over time in disenrollment rates -- overall, and by characteristics of beneficiaries and HMOs.

Nonrenewing risk HMOs and CMPs are excluded from the analysis. Beneficiaries enrolled in these plans must, necessarily, disenroll or be disenrolled at the time the plan withdraws from the risk program. Inclusion of these nonrenewing plans in the analysis would inappropriately include these "involuntary" disenrollments and would inflate the true disenrollment rates. In addition, individuals who died during the period of observation were excluded from the analysis.

The analysis of disenrollment rates by characteristics of Medicare beneficiaries is limited to an examination of the characteristics that are included in the GHPO file. These characteristics data are maintained on the file for payment purposes and are the factors that determine the adjusted average per capita cost (AAPCC) level. Data on the following variables constitute the characteristics of Medicare beneficiaries:

- age group
- current reason for Medicare entitlement
- Medicaid eligibility
- institutional status
- sex

In addition, race of the beneficiary is available on the GHPO file. Differential disenrollment rates of beneficiaries with these characteristics provide some information on the extent to which individuals with a propensity to use more or fewer services are disenrolling from risk HMOs and CMPs.

Characteristics of individual HMOs and CMPs in the risk program were available from HCFA and from InterStudy annual reports. These HMO characteristics comprise data pertaining to the following variables:

- model type
- profit status
- chain affiliation
- Medicare enrollment
- total enrollment

HMOs and CMPs that had fewer than 100 Medicare enrollees also were excluded from the analysis. Appendix B presents the characteristics of each HMO/CMP that held a risk contract between April 1985 and July 1988.

C. DISENROLLMENT FROM INDIVIDUAL HMOS AND CMPS

Results of the analysis of the disenrollment experience of beneficiaries enrolled in each risk HMO and CMP that was continuously active through July 1988 are presented in this section. This detailed information permits examination of differences in disenrollment rates and in disenrollment trends over time for specific HMOs and CMPs.

1. Disenrollment Rates by Duration of Enrollment

Beneficiaries who enrolled between April 1985 and July 1987 were followed for 12 months to determine the rate at which beneficiaries disenroll within 12 months after joining a risk HMO or CMP. Table III.1 shows the mean rate of disenrollment, from all 109 risk plans that were operational in June 1988, at 3 months, 6 months, and 12 months, as well as the highest and lowest rates of disenrollment for individual plans at each of these time intervals. Over 7 percent of beneficiaries in this cohort disenrolled within 3 months of joining an HMO, 12 percent had disenrolled within 6 months, and 20 percent disenrolled within 12 months.

TABLE III.1

SUMMARY DISENROLLMENT RATES: Beneficiaries Enrolled Between April 1985 and July 1987

Distributions	Total Enrollments	Proportion Disenrolling By 3 Months	Proportion Disenrolling By 6 Months	Proportion Disenrolling By 12 Months
Mean Rate Of All Risk Plans*	858,812	7.2	11.7	20.0
Plan with Highest Rate	101,557	28.7	49.6	59.7
Plan with Lowest Rate	108	0.5	0.9	2.6

*Includes those HMOs and CMPs in which more than 100 beneficiaries enrolled between April 1985 and July 1987.

Disenrollment rates for individual plans showed a great deal of variation, ranging from 2.6 to 59.7 percent for the 12-month period.

The 3-month disenrollment rate for this group of risk plans is also of interest, since it is quite likely that many beneficiaries who disenroll within 3 months of joining an HMO do so because they joined the plan under some misperception of the program, quickly disenrolling when they discover how the plan works. The 3-month disenrollment rate for the program is 7.1 percent. The range, however, is from 0 to 28.7 percent.

In Table III.2, the 3-month, 6-month, and 12-month disenrollment rates are presented for each of these 109 HMOs and CMPs. The following four HMOs had the highest 3-month disenrollment rates (20 percent or over):

- West Michigan Health Care Network (Michigan)
- Network Health Plan (Florida)
- CAC (Florida)
- AV-MED (Florida)

Two of these four plans with exceptionally high early disenrollment rates had been demonstration plans prior to converting to risk status. Since these plans have more experience with Medicare enrollees and are located in an area (Florida) where the HMO concept is generally well known, it is surprising that beneficiaries appear to disenroll in such high numbers after a short time. Some of this disenrollment may be due to the beneficiary deciding that another HMO offers a more suitable plan (there are a number of risk HMOs in the South Florida market); some may be due to heavy advertising that attracts beneficiaries who don't completely understand the program.

TABLE III.2

DISENROLLMENT RATES BY DURATION OF ENROLLMENT: BENEFICIARIES ENROLLED BETWEEN APRIL 1985 AND JULY 1987

State Name	Plan Name[a,b,c]	Total Enroll-ments	Cumulative Disenrollment Rates 3-Month	6-Month	12-Month
AZ	FHP of Arizona	14,336	9.1	21.3	43.3
CA	*Secure Horizons	67,667	3.7	6.3	11.9
CA	Inter Valley	4,039	4.7	5.9	7.6
CA	FHP	56,044	7.9	12.1	18.3
CA	Inland HP	19,288	8.7	12.9	20.2
CA	United Health Plan (Watts)	18,151	12.7	19.9	30.4
CA	*Peak Health Plan	2,810	5.3	8.5	14.5
CA	Children's Hospital	6,095	2.9	4.9	8.5
CA	French Hospital (Health Plan)	3,685	7.6	9.9	14.9
CA	Bay Pacific	13,307	1.2	2.0	4.4
CA	*National Med, Inc.	905	1.5	2.7	4.9
CA	Healthcare	1,607	4.5	7.8	14.2
CO	HMO of Colorado, Denver	2,435	6.2	11.4	23.9
CO	Kaiser Colorado	12,578	2.5	3.9	6.4
CO	CompreCare, Inc.	3,068	3.4	7.9	10.8
CO	Peak Health Plan Ltd. RC	6,868	1.9	3.7	8.0
CT	Physician Health Services	4,288	1.1	1.9	4.7
FL	Health Options of South Florida	13,977	17.0	24.9	38.7
FL	Network Health Plan (Health Care)	9,638	25.3	35.5	53.7
FL	CAC(Comprehensive American Care)	28,165	21.2	31.5	43.2
FL	*Humana Medical Plan	101,557	17.0	28.2	40.0
FL	AV-MED	6,178	20.1	26.3	35.7
FL	Heritage (Health Plan of S. FL)	2,130	19.4	38.6	56.6
FL	*Maxicare/HealthAmerica	1,693	9.1	15.8	26.6
FL	Health Options - Jacksonville	3,350	3.9	7.6	15.6
FL	Florida HCP (Daytona)	6,886	3.6	6.2	10.9

TABLE III.2 (Continued)

State Name	Plan Name[a,b,c]	Total Enrollments	Cumulative Disenrollment Rates		
			3-Month	6-Month	12-Month
GA	Kaiser of Georgia	108	3.7	4.8	7.7
HI	HMSA - Honolulu	19,663	2.8	4.4	7.3
HI	Kaiser FHP - Honolulu	2,804	1.5	6.7	10.1
IL	Michael Reese Health Plan	10,484	6.5	11.3	17.8
IL	HMO Great Lakes (Healthwin)	5,854	8.8	15.8	36.4
IL	HealthChicago	11,025	4.7	6.6	11.9
IL	Anchor	5,524	3.7	6.8	13.0
IL	Share Illinois	18,624	7.3	13.2	20.9
IN	Key Health Plan	7,127	2.7	5.2	10.8
IN	MetroHealth	4,605	3.6	6.1	11.8
IA	Share Iowa	3,495	5.1	8.4	13.2
KS	Health Care Plus, Wichita	6,412	4.8	6.5	11.2
KS	HMO Kansas, Wichita	1,567	5.9	12.9	22.3
KS	HMO Kansas, Topeka	915	7.5	10.6	15.9
KS	HMO Kansas, Kaw Valley	394	4.3	8.2	20.8
KS	HMO Kansas, South Central	1,283	4.2	8.9	35.1
MD	MD - IPA	1,465	1.5	2.6	8.1
MD	HealthPlus	1,648	3.2	4.7	9.4
MD	CareFirst	258	1.2	4.7	11.4
MA	*Kaiser	1,627	2.7	3.6	5.5
MA	Medical West Community HP	3,655	1.0	1.6	3.4
MA	Montachusett Health Plan	1,964	1.5	2.9	5.1
MA	Central Mass. Health Care	5,337	2.1	4.3	12.3
MA	Fallon Community Health Plan	5,231	1.5	2.4	3.9
MA	Lahey Clinic	1,510	1.8	2.4	5.6
MA	Bay State HC	3,570	1.7	2.8	5.8
MA	Tufts Assoc. Health Plan	4,665	2.2	4.2	9.4
MA	Medical East Community HP	3,122	1.9	3.1	6.0
MA	Harvard Community Health Plan	4,916	3.9	5.3	8.8
MA	Multigroup Health Plan	4,630	2.3	4.2	17.8
MA	Community HP (Hillcrest)	1,013	2.5	5.1	8.0
MA	Berkshire Health Plan	1,490	1.8	2.1	3.6
MA	Community HP (Wing/Far)	567	2.7	4.1	6.0

TABLE III.2 (Continued)

State Name	Plan Name[a,b,c]	Total Enroll-ments	Cumulative Disenrollment Rates 3-Month	6-Month	12-Month
MI	HealthPlus	4,609	2.9	6.6	17.1
MI	Greater Flint HMO	1,343	0.6	3.9	28.2
MI	BlueCare	22,776	2.9	5.4	23.9
MI	Health Central	2,329	2.5	7.4	24.9
MI	McAuley	1,722	0.5	0.9	15.0
MI	Health Alliance (Plan of Michigan)	4,056	2.3	4.1	11.3
MI	West Michigan HealthCare Network	2,467	28.7	49.6	59.7
MN	Medical Center Duluth	7,764	1.8	3.0	4.8
MN	HMO Minn. Duluth	3,298	1.8	2.9	7.5
MN	PHP of Minnesota	66,646	1.7	4.5	14.9
MN	MedCenters Health Plan	9,949	2.6	5.4	13.9
MN	Group Health Inc.	7,505	3.7	5.8	9.2
MN	Share	21,824	4.0	7.0	16.1
MN	HMO Minn. - Northeast	2,057	0.9	1.8	5.4
MN	Medical Center - Moorhead	1,947	1.6	2.5	4.4
MO	Sanus Health Plan	934	2.5	3.5	8.5
NE	Share Nebraska	4,609	7.4	10.9	15.8
NV	HP of Nevada - Reno	4,964	2.4	5.2	14.7
NV	HP of Nevada - Las Vegas	12,749	5.0	8.8	15.6
NJ	OmniCare	2,638	3.2	4.6	7.8
NJ	HIP of New Jersey	1,518	2.1	4.5	7.0
NJ	*Foundation Health Plan	452	7.1	15.5	21.0
NM	Lovelace	6,585	4.8	8.5	28.7
NM	FHP New Mexico	8,162	7.4	11.4	18.4
NY	Preferred	6,884	1.4	2.2	10.9
NY	Genesee Valley Grp. Health Assoc.	3,268	2.7	4.3	7.2
NY	Blue Choice	4,938	0.9	1.7	3.7
NY	Rochester Health Network	688	0.6	2.3	29.5
NY	Capital Area	2,294	1.8	3.3	6.4
NY	HCP/Buffalo	1,812	1.9	2.5	3.7

TABLE III.2 (Continued)

State Name	Plan Name[a,b,c]	Total Enrollments	Cumulative Disenrollment Rates		
			3-Month	6-Month	12-Month
NC	Kaiser of North Carolina	867	1.5	2.2	4.2
ND	Medical Center - Fargo	454	1.8	2.4	6.8
OH	HMO Health Ohio	1,559	3.6	5.5	12.1
OH	Preferred Care	1,584	4.6	5.6	7.7
OH	Kaiser Ohio	2,395	1.5	2.9	5.7
OK	PruCare of Tulsa	429	5.4	7.3	9.4
OR	*Secure Horizons	8,850	3.1	4.5	7.4
OR	Kaiser - North West	20,799	2.4	4.0	7.0
PA	*Maxicare Philadelphia	2,697	7.8	10.6	15.9
PA	HMO PA	20,299	6.0	11.5	20.2
PA	Greater Delaware Valley	204	8.3	11.3	15.7
PA	HMO Western PA	3,195	2.9	5.1	10.1
RI	RIGHA	4,006	1.5	2.6	5.4
TX	PruCare of Houston	874	6.3	8.6	11.4
TX	Sanus HP - Houston	1,240	4.3	5.8	12.9
TX	Sanus HP - Dallas	135	0.7	1.5	9.9
TX	Humana	2,514	4.3	7.1	12.2
WI	GHC - South Central Wisconsin	161	3.1	3.8	5.7
WI	FHP Coop.	2,940	0.8	1.7	2.6

DATA SOURCE: Group Health Plan Operations (GHPO) File

NOTES:

* The plan's name changed at some point in time. The current plan name is indicated; Appendix B contains a list of previous plan names.

[a] Enrollees who died within the time period are not included in the calculation of the rates.

[b] Only HMOs and CMPs with at least 100 enrollees are included in the analysis.

[c] Only HMOs and CMPs that maintained their risk contracts through July 1988 are included in the analysis.

The substantial experience of these HMOs in marketing to the Medicare population would suggest that they would be more effective than younger HMOs in ensuring that beneficiaries understood the program prior to joining. However, the data presented here indicate that there still may be inadequate information dissemination even by the more experienced HMOs. The HMOs and CMPs with the highest 12-month disenrollment rates (40 percent or more) are:

- West Michigan Health Care Network (Michigan)
- Heritage (Florida)
- Network Health Plan (Florida)
- CAC (Florida)
- FHP of Arizona (Arizona)
- Humana Health Plan (Florida)

The following plans had the lowest 12-month disenrollment rates (under 5 percent):

- Bay Pacific (California)
- National Med (California)
- Physician Health Services (Connecticut)
- Medical West Community Health Plan (Massachusetts)
- Fallon Community Health Plan (Massachusetts)
- Berkshire Health Plan (Massachusetts)
- Medical Center Duluth (Minnesota)
- Medical Center - Moorhead (Minnesota)
- Blue Choice (New York)
- HCP/Buffalo (New York)
- Kaiser of North Carolina (North Carolina)
- FHP Cooperative (Wisconsin)

No clear pattern emerges from the available data to explain what these plans had in common that contributed to low disenrollment rates. Two of the 12 plans with the lowest disenrollment rates were originally in the program under demonstration status and converted to program status in April 1985. Otherwise, these HMOs are geographically scattered and range in total enrollments from 867 in Kaiser of North Carolina to 13,307 in Bay Pacific (CA).

The distribution of risk HMO/CMPs by 3-month and 12-month disenrollment rates for beneficiaries who enrolled between April 1985 and July 1987 is shown in Table III.3. Approximately 75 percent of the 109 HMOs and CMPs to which these data apply had 3-month disenrollment rates that were below 5 percent, while only 7 percent had rates higher than 15 percent. The distribution of plans by 12-month disenrollment rates shows a similar pattern, with two-fifths of the plans having 12-month rates below 10 percent, and only one in eight with rates above 25 percent. A minority of plans appear to account for a substantial fraction of the total number of beneficiaries disenrolling from the program. There were 11 HMOs and CMPs with 12-month rates over 25 percent; these 11 HMOs and CMPs accounted for 58 percent of total disenrollments within 12 months and for 25 percent of total enrollments. The disenrollment rates, by themselves, do not provide a full picture of the implications of disenrollment, however. It is equally important to understand the choices that disenrolling beneficiaries are making about their post-disenrollment arrangements. Beneficiaries who disenroll and return to fee-for-service arrangements may do so because they dislike the HMO concept after trying it or because there are no other Medicare HMOs operating in the area. Beneficiaries who disenroll and then enroll in another risk HMO or CMP may be presumed to prefer HMO style care, but not the particular style of care or benefit package offered by the HMO they originally enrolled in.

TABLE III.3

DISTRIBUTION OF RISK HMOs/CMPs BY DISENROLLMENT RATES: BENEFICIARIES ENROLLED BETWEEN APRIL 1985 AND JULY 1987

	Number of HMO/CMPs	
Disenrollment Rate	3-Month Rates	12-Month Rates
0 to 4.9	80	12
5 to 9.9	21	34
10 to 14.9	1	27
15 to 19.9	2	12
20 to 24.9	2	9
25 to 29.9	3	4
30 to 39.9	0	6
40 to 49.9	0	2
50 to 59.9	0	3
60 to 69.9	0	0
70 to 79.9	0	0
80 to 89.9	0	0
90 to 99.9	0	0
TOTAL	109	109

The majority of Medicare beneficiaries who have an HMO option available to them are in multiple plan markets. Of 835,862 beneficiaries who were enrolled between April 1985 and July 1987 in plans that were continuously operating through mid-1988, over 88 percent had more than one HMO option available to them. Of those in multiple plan markets, 30 percent of the 12-month disenrollees switched to another risk plan. Surprisingly, even among beneficiaries who were located in areas with only a single risk HMO option, over 10 percent joined another risk HMO or CMP after disenrolling from their initial HMO choice. Presumably, these beneficiaries moved, either permanently or seasonally, from a single HMO market area to another area with one or more risk HMOs, and this mobility accounts for their post-disenrollment choice. For 90 percent of disenrolling Medicare beneficiaries in the study group, an alternative HMO option was available when they decided to leave their original HMO.

Table III.4 summarizes new health care arrangements of disenrollees, separately for the early cohort and for the full cohort. The overall disenrollment rate of the full cohort was slightly greater than that of the early cohort. In addition, the proportion disenrolling after 12 months to return to fee-for-service arrangements declined slightly -- from 73.8 percent (early cohort) to 71.5 percent (full cohort). The decline in this rate may be attributable to the greater availability of HMO alternatives in the 1987-88 period. Evidence of this is provided by the finding that, for the early cohort, the proportion of disenrollees returning to

TABLE III.4

NEW HEALTH CARE ARRANGEMENTS OF DISENROLLEES

	April 1985 to July 1986 Cohort[a]	Percent of Disenrollees[b]		April 1985 to July 1987 Cohort[b]	Percent of Disenrollees[b]	
Duration of Enrollment	Total Disenrollment Rate[c]	Returning to Fee-for-Service	Enrolling in New Risk HMO/CMP	Total Disenrollment Rate[c]	Returning to Fee-for-Service	Enrolling in New Risk HMO/CMP
3 Months or Less	6.6	74.2	19.7	7.2	69.0	23.9
Up to 6 Months	11.1	74.8	19.8	11.7	70.1	23.9
Up to 12 Months	18.3	73.8	20.8	20.0	71.5	23.5
Up to 24 Months	33.2	72.0	23.5	--	--	--

[a] Enrollees who died are excluded from this analysis.

[b] The sum of the percent of disenrollees returning to fee-for-service plus the percent enrolling in new risk HMO/CMP does not necessarily equal 100 percent, since some disenrollees (4-6%) enrolled in cost HMOs or Health Care Prepaid Plans (HCPPs) - both of which are reimbursed on a cost rather than a risk basis.

[c] Risk HMOs and CMPs with fewer than 100 enrollees were excluded from the analysis.

DATA SOURCE: Group Health Plan Operations File; computations by Mathematica Policy Research.

fee-for-service declined for those who disenrolled between 12 and 24 months after joining -- a period that encompassed July 1987 through July 1988. Overall, the analysis of disenrollment rates during the initial 3 years of the risk program and the patterns of new health care arrangements observed are remarkably consistent with the experience of the Medicare Competition Demonstration plans that had entered the Medicare program between 1982 and 1984. Brown (1987) reported a total 24-month cohort disenrollment rate for 16 demonstration plans of 29.5 percent -- slightly below the 33.2 percent 24-month disenrollment rate for beneficiaries joining the risk program through mid-1986. In addition, Brown reported that 23.6 percent of disenrollees enrolled in another HMO or CMP within 2 months of disenrolling from their original plan, a figure very close to the 23.5 percent of 24-month disenrollees in this study who were found to have enrolled in another HMO or CMP within 3 months of disenrolling from their plan.

D. DISENROLLMENT RATES BY CHARACTERISTICS OF BENEFICIARIES

Disenrollment rates by beneficiary characteristics can provide a perspective on the types of Medicare beneficiaries who may find HMO-style managed care unsatisfactory. In the Medicare Competition Demonstrations, analysis of disenrollment patterns revealed that older, sicker beneficiaries were more likely to disenroll than were younger, healthier enrollees, but those who disenrolled to join another HMO or CMP were healthier and less worried about their health than were continuing enrollees (Langwell, Hadley, and Tucker, 1989).

Data on beneficiary characteristics available for the period consists of only the variables on the GHPO file that are used primarily for payment and monitoring purposes: age group, reason for entitlement, welfare status, institutional status, race, and sex.

Table III.5 presents 12-month disenrollment rates and new health care arrangements, for the April 1985 through July 1987 cohort, by characteristics of beneficiaries. In addition, the characteristics of beneficiaries who return to fee-for-service arrangements or enroll in another HMO or CMP are shown. While 20 percent of all enrollees disenrolled within 12 months, the disenrollment rate does vary considerably by beneficiary characteristics:

- Beneficiaries most likely to disenroll were:
    - older
    - disabled
    - Medicaid eligible
    - Black
- Beneficiaries least likely to disenroll were:
    - 65 to 69 years of age
    - institutionalized
    - Asian and other non-white, non-black groups

When disenrollees were grouped according to those going to fee-for-service arrangements and those joining other HMO programs, only a few differences between these two groups were evident:

- Older disenrollees were somewhat less likely to join another HMO.
- Medicaid-eligible beneficiaries were somewhat more likely to join another HMO.
- Over two-thirds of institutionalized beneficiaries who disenrolled joined another HMO.

TABLE III.5

TWELVE-MONTH DISENROLLMENT RATES AND NEW HEALTH CARE ARRANGEMENTS, BY BENEFICIARY CHARACTERISTICS: APRIL 1985 TO JULY 1987 ENROLLEES

Beneficiary Characteristics	Total Enrollments[a]	Percent Disenrolled Within 12 Months	Percent of Disenrollees Returning to Fee-for-Service	Percent of Disenrollees Enrolling in New HMO
TOTAL ENROLLEES	835,862	20.0	71.5	28.5
AGE GROUP				
Under 65	39,364	26.3	68.2	31.8
65 to 69	323,426	17.3	70.5	29.5
70 to 74	210,015	19.7	71.3	28.7
75 to 79	140,349	21.7	71.7	28.3
80 to 84	78,245	23.1	74.0	26.0
85 and over	44,463	24.4	75.8	24.2
CURRENT REASON FOR ENTITLEMENT				
OASI	803,272	19.6	71.6	28.4
Disability	32,590	28.5	70.0	30.0
WELFARE STATUS				
Not Eligible	811,182	19.3	71.8	28.2
Eligible	24,464	42.8	67.4	32.6
Unknown	216	27.3	83.1	16.9
INSTITUTIONAL STATUS				
Non-institutionalized	831,377	20.1	71.6	28.4
Institutionalized	4,485	5.8	32.7	67.3
RACE				
White	728,141	18.9	74.6	25.4
Black	55,066	38.8	49.4	50.6
Other	31,948	12.6	77.3	22.7
Unknown	20,707	19.6	75.4	24.6

Table III.5 (Continued)

			Percent of Disenrollees	
Beneficiary Characteristics	Total Enrollments[a]	Percent Disenrolled Within 12 Months	Returning to Fee-for-Service	Enrolling in New HMO
SEX				
Male	359,355	20.3	69.4	30.6
Female	476,507	19.7	73.1	26.9

[a] Disenrollments from HMOs that terminated from the TEFRA program are not included. Enrollees who died within 1 year of enrollment and HMOs and CMPs with fewer than 100 enrollees were excluded from the analysis.

DATA SOURCE: Group Health Plan Operations (GHPO) File. Beneficiary characteristics are from the GHPO File (July 1988) as of the beneficiary's date of enrollment. Computations by Mathematica Policy Research.

- o Blacks were substantially more likely to join another HMO.

Overall, there appears to be some evidence to support a contention that disenrollment patterns increase biased selection within the risk HMO/CMP program, at least on the basis of the limited amount of data available. Those most likely to disenroll (older, disabled, and Medicaid-eligible beneficiaries) tend to use substantially more services on average than other beneficiaries. Institutionalized beneficiaries, on the other hand, also have high utilization but low disenrollment rates. This difference, however, is relatively unimportant, since so few enrollees (half of 1 percent) are in this category.

AAPCC payments to HMOs are based on each enrollee's age, sex, Medicaid eligibility status, reason for entitlement, and institutional status. Our results indicate that disenrollees tend to fall into the higher payment categories. These results, however, do not necessarily imply that HMOs are better off financially because of the higher disenrollment rates for these groups of individuals, as long as the disenrollees within each of these categories are not more likely to use services than the average beneficiary within each category. Nevertheless, if the observed pattern is indicative of a more general result that those with greater needs, whether reflected in the AAPCC characteristics or not, are most likely to disenroll, then the above results do suggest favorable selection for HMOs from disenrollment. Results from the evaluation of the Medicare Competition Demonstrations did indicate that disenrollment patterns in the demonstration plans resulted in substantial favorable selection: disenrollees' average Medicare payment for the 2 years prior to enrollment was $2,987 compared with an average $1,938 payment for beneficiaries who remained in the HMO (Brown 1987).

The differences among beneficiary groups in terms of post-disenrollment health care arrangements also are quite minimal, except that a disproportionate number of institutionalized and black disenrollees switch to another HMO. These differences are quite striking, although the two groups combined constitute a relatively small fraction of all risk enrollees -- only about 7 percent. Institutionalized beneficiaries are assumed to use more services, and thus to cost the HMOs more money than noninstitutionalized beneficiaries. The effect of the use and cost patterns of black beneficiaries on the HMO is more complex. Non-white beneficiaries in fee-for-service tend to use fewer services per 1,000 enrollees than white beneficiaries but have higher reimbursements (U.S. Department of Health and Human Services, 1987). This pattern holds for both Part A and Part B services and may indicate difficulties in achieving needed access to care in the fee-for-service sector, a pattern that could lead to increased utilization once coverage is improved by joining an HMO.

There also is some possibility that the disproportionate number of institutionalized and black disenrollees switching to another HMO may be a result of the combining of single- and multiple-market plans in this analysis; although nearly 90 percent of beneficiaries in areas served by risk HMO/CMPs have at least two plans to choose from, single-plan markets may be sufficiently different demographically to account for these findings. Further attention is given to this issue in Chapter V, below, which discusses disenrollment and competition in multiple-plan market areas.

E. DISENROLLMENT RATES BY HMO CHARACTERISTICS

The organizational structure, mechanisms used to control enrollees' use of services, and financial incentives among HMOs and CMPs vary widely. The ability of these different types of organizations to provide satisfactory care to Medicare beneficiaries may differ substantially. Brown (1987) reported that disenrollment rates for Medicare demonstration plans were much lower among plans that were nonprofit, Group Model HMOs, and not federally qualified for the non-Medicare market. Table III.6 shows 12-month disenrollment rates and new health care arrangements of disenrollees, by characteristics of the HMO. The data indicate that disenrollment rates are lower for HMOs and CMPs that:

- have nonprofit status,
- are chain affiliated,
- enroll between 1,000 and 10,000 Medicare beneficiaries, and
- enroll a combined total of 20,000-49,999 Medicare beneficiaries and non-Medicare recipients.

On the other hand, those plans with noticeably higher than average disenrollment rates are found to:

- be Network/Mixed Model plans,
- be for-profit, and

TABLE III.6

TWELVE-MONTH DISENROLLMENT RATES AND NEW HEALTH CARE ARRANGEMENTS, BY HMO CHARACTERISTICS: APRIL 1985 THROUGH JULY 1987 ENROLLEES

HMO Characteristics	Total Enrollments[a]	Percent Disenrolling Within 12 Months	Percent of Disenrollees Returning to Fee-for-Service	Percent of Disenrollees Enrolling in New HMO or CMP
TOTAL ENROLLEES	835,862	20.0	71.5	28.5
MODEL TYPE				
Staff	123,246	19.6	59.1	40.9
Group	217,122	16.6	73.5	26.5
IPA	411,521	18.4	75.0	25.0
Network/Mixed	83,973	37.1	70.2	29.8
PROFIT STATUS				
For profit	375,379	24.8	72.0	28.0
Non-profit	460,483	16.1	70.9	29.1
CHAIN AFFILIATION				
Chain affiliation	480,938	17.5	78.8	21.2
Independent	354,924	23.4	64.0	36.0
MEDICARE ENROLLMENT				
0-999	19,469	24.7	60.7	39.3
1,000-4,999	153,219	13.1	73.5	26.5
5,000-9,999	136,595	14.8	65.1	34.9
10,000-19,999	217,157	23.4	69.1	30.9
20,000 and above	309,422	23.0	75.2	24.8
TOTAL PLAN ENROLLMENT (MEDICARE AND NON-MEDICARE)				
0-19,999	69,539	25.0	66.1	33.9
20,000-49,999	102,517	13.7	81.5	18.5
50,000-99,999	163,613	21.2	62.2	37.8
100,000 and above	457,850	19.9	77.5	22.5
Data not available	42,343	22.8	43.4	56.6

[a] Disenrollments from nonrenewing risk HMOs are not included in the table. Enrollees who died within 1 year of enrollment and risk HMOs and CMPs with fewer than 100 enrollees were excluded from the analysis.

DATA SOURCES: Group Health Plan Operations (GHPO) File. Sources for HMO characteristics are OPHC Reports (for Model Type, Profit Status, Chain Affiliation, Medicare Enrollments) and InterStudy Edge or Annual Reports for 1985 to 1988 (for Total Plan Enrollment)

- enroll fewer than 1,000 or more than 10,000 Medicare beneficiaries and fewer than a combined total of 20,000 (or greater than a combined total of 50,000) Medicare and non-Medicare members.

The variation in disenrollment rates by characteristics of the HMOs and CMPs is relatively small. The mean disenrollment rate across all plans is 20 percent; the lowest disenrollment rate associated with a characteristic (Medicare enrollment 1,000 to 4,999) is 13.1 percent and the highest rate associated with a characteristic (Network/Mixed Model) is 37.1 percent. While the pattern of variation is clear, and consistent with the findings of the evaluation of the Medicare Competition Demonstrations, it isn't clear how these characteristics are related to the ability of the HMOs and CMPs to retain Medicare beneficiaries.

It seems likely that the observed variation in disenrollment rates reflects some correlation between these known characteristics and other internal organizational characteristics such as enrollment and marketing strategies, utilization controls, and other management factors that have not been examined. For example, beneficiaries who are in plans with a primary care "gatekeeper" must first see and then obtain a referral from the gatekeeper in order to see a specialist. Medicare beneficiaries who are accustomed to making direct appointments with specialists may find the gatekeeper approach onerous and/or may experience anxiety or frustration over having to delay seeing a specialist because of the gatekeeper requirement. Those who have the greatest requirements for specialist services and are more worried about their health may have a tendency to disenroll.

If that is so, and the use of a primary care gatekeeper is more common in certain types of HMOs (for example, chain affiliates), the chain-affiliated HMOs would exhibit higher disenrollment rates; however, the relationship would actually be between disenrollment and the gatekeeper mechanism, not between disenrollment and chain affiliation. These types of relationships have not as yet been explored, but as more data on the organizational characteristics of risk plans become available it may be useful to identify utilization controls and financial arrangements that appear to be associated with higher disenrollment rates.

F. DISENROLLMENT RATES BY REGION

The distribution of risk HMO/CMP enrollment by region of the country varies from a high of 241,610 in the Pacific South West (Arizona, Nevada, California, Hawaii) to a low of 19,096 in the West Central Region (Iowa, Missouri, Nebraska, Kansas). Table III.7 summarizes the disenrollment experience of risk plans and their enrollees by region. The 12-month disenrollment rate ranges from a low of 7.1 percent in the Pacific North West region to a high of 39.3 percent in the South East region (which includes Florida). Among disenrollees, the percent returning to fee-for-service was between 96 percent in the West Central region and 56 percent in the South East region. Among these areas, the availability of alternative HMO options varied widely -- in the West Central region, there is only one HMO in Iowa, one in Nebraska, and five small plans in Kansas, only two of which appear to be in same market area. Thus, disenrollment to fee-for-service is high where there are few options

TABLE III.7

TWELVE-MONTH DISENROLLMENT RATES AND NEW HEALTH CARE ARRANGEMENTS, BY REGION AND COMPETITIVE STATUS OF AREA

Region/ Competitive Status	Total Enrollments*	Percent Disenrolling Within 12 Months	Percent of Disenrollees Returning to Fee-for-Service	Percent of Disenrollees Enrolling in New HMO or CMP
TOTAL ENROLLEES	835,862	20.0	71.5	28.5
FEDERAL REGION				
I New England (ME,NH,VT,MA,RI,CT)	50,348	7.6	72.9	27.1
II North Mid-Atlantic (NY,NJ)	23,971	8.2	69.2	30.8
III Mid-Atlantic (PA,DE,MD,WV,VA)	28,971	17.4	94.5	5.5
IV South East (NC,SC,KY,TN,MS,AL,GA,FL)	170,003	39.3	56.3	43.7
V North Central (OH,IN,IL,MI,WI,MN)	228,828	16.8	77.6	22.4
VI South Central (AR,LA,TX,OK,NM)	19,466	20.1	86.2	13.8
VII West Central (IA,MO,NE,KS)	19,096	15.4	96.4	3.6
VIII Mountain (ND,SD,WY,MT)	24,757	9.1	78.3	21.7
IX Pacific South West (AZ,NV,CA,HI)	241,610	16.5	84.7	15.3
X Pacific North West (ID,OR,WA,AK)	28,812	7.1	67.2	32.8
PRESENCE OF RISK HMOS IN MARKET AREA - JANUARY 1988				
Single Risk Plan	100,204	16.8	89.8	10.2
Multiple Risk Plans	735,658	20.4	69.4	30.6

DATA SOURCE: Group Health Plan Operations (GHPO) File

*Disenrollments at nonrenewing risk HMOs are not included in the table.
All enrollees who died within 1 year of enrollment and risk HMOs and CMPs with fewer than 100 enrollees were excluded from the analysis.

available to beneficiaries. In the South East region, only Florida has competing HMOs and these account for approximately two-thirds of all the risk plans in this region.

G. SUMMARY OF FINDINGS

The analyses in this chapter provide a comprehensive overview of some of the main trends and patterns in HMO disenrollment under the risk program. Key findings include the following:

- Overall, 7 percent of enrollees had disenrolled within the first 3 months after enrolling, 12 percent had disenrolled by 6 months, and 20 percent had left the HMO within 1 year of their enrollment date. One-third of enrollees had disenrolled within 2 years of enrolling.

- Substantial variation occurs in disenrollment rates at selected points in time for different plans. For example, 24-month cumulative disenrollment rates varied between 4 percent and 84 percent.

- The rate of disenrollment during the first 3 months following enrollment (6 to 7 percent) is slightly higher than the rate for subsequent 3-month intervals (4 to 5 percent), especially in areas with only one HMO. This finding is consistent with the expectation that disenrollment may be higher at first due to lack of understanding of the implications of HMO enrollment on the part of some beneficiaries when they enroll. It may, therefore, be important to provide more extensive information to potential enrollees about how HMOs operate.

- Over two-thirds of the disenrollees from active (nonterminating) HMOs at each of the points in time returned to fee-for-service. Although this pattern may be attributable to some factor such as an increase in HMO fees, it also may reflect some level of dissatisfaction with HMO services or style of care.

- The proportion of enrollees who disenrolled within the first 12 months after joining increased by about five percentage points from 1985 to 1987. This change, however, may be due to increased competition, fee increases, or reductions in covered HMO services rather than dissatisfaction with HMO care per se.

- The probability of disenrolling was found to increase with age and was also found to be higher for Medicare beneficiaries who are entitled due to disability. Disenrollment rates were also higher for beneficiaries on welfare and black beneficiaries. All of these patterns, which are consistent across time, indicate that individuals from groups who more likely to be in poorer health and require more services may be more likely to disenroll.

- Disenrollment rates are generally higher among Network/Mixed HMOs, for-profit HMOs, and HMOs not affiliated with a chain. Disenrollment rates also tended to be higher among plans with relatively few Medicare enrollments (fewer than 1,000 enrollees) or with relatively many Medicare enrollments (more than 10,000).

- Disenrollment rates were higher among plans in areas with multiple risk HMOs. While some of these disenrollees switched to other HMOs, an even greater proportion returned to fee-for-service care.

The analyses summarized above used cohort-based rates in order to gain insights into beneficiaries' behavior and to learn how their behavior may change over time or how it may be affected by HMO or market characteristics. The results provide an overall picture of disenrollment levels and trends and indicate what types of beneficiaries or plans have the highest disenrollment rates.

The results provide little indication of why these relationships exist. From the descriptive presentation, it is not possible to determine whether high disenrollment rates are indicators of poor quality of care, of beneficiary dissatisfaction with some aspect of HMOs in general (e.g., the lock-in provision), of suspect marketing efforts, of changes in benefits or provisions, or of increasing competition. The substantially greater disenrollments for HMOs in multiple-plan areas suggest that competition plays some role. Nonetheless, the percent of enrollees who return to fee-for-service in multiple-plan areas is higher than the percent who switch to another HMO, which suggests that plans in these areas may be recruiting enrollees without fully informing them of the implications of enrollment, or that other sources of dissatisfaction are present. If this is the case, it may be that the Omnibus Budget Reconciliation Act of 1986, which mandated that plans provide beneficiaries with an explanation of enrollees rights at the time of enrollment (and annually thereafter), will have an effect on disenrollment rates. This explanation (which was effective for enrollments occurring after January 1, 1987) was mandated by statute to include, among other issues, a discussion of lock-in and other restrictions on coverage for services provided by non-HMO affiliated providers.

The remainder of this report explores in more detail the relationships among disenrollment, satisfaction, quality of care, and competition.

IV. DISENROLLMENT PATTERNS AND QUALITY OF CARE

A. OVERVIEW

Quality of care in risk HMOs/CMPs is very difficult to measure on a continuing basis. Nonetheless, to the extent that Medicare beneficiaries' perceptions of quality of care are accurate and perceived quality problems affect beneficiaries' decisions about whether to remain in the HMO, then rates of beneficiary disenrollment and changes in the disenrollment patterns of beneficiaries over time may provide an indicator of quality problems in HMOs that are serving Medicare beneficiaries. In this chapter, data from the evaluation of the Medicare Competition Demonstrations are used to explore the relationship between disenrollment rates and selected quality of care indicators. This analysis is not intended to evaluate that relationship, but rather to examine the value of monitoring rates of disenrollment, as HCFA is now doing on a regular basis, as a means of identifying plans in which quality of care problems may exist. While the number of HMOs and CMPs for which data on quality of care indicators are available is small (17), the number is sufficient to permit an initial assessment of the potential value of monitoring disenrollment rates.

B. MEASURES OF QUALITY OF CARE

The evaluation of the demonstration included a substantial emphasis on the impact of risk contracts on quality of care provided to Medicare beneficiaries, with quality of care defined broadly to encompass the process of the clinical care provided to Medicare beneficiaries and outcomes of care, including beneficiary satisfaction with both the provision of and access to care. For this exploratory study, the association between disenrollment rates and quality indicators related to satisfaction and access to care was analyzed. Specifically, disenrollment rates were calculated for HMOs that were rated either above or below average (based on beneficiaries' survey responses) on one measure of access to care and the following seven measures of beneficiary satisfaction with the provision of care:

- Overall satisfaction
- Professional competence
- Courtesy of HMO staff
- Convenience of appointments
- Availability of emergency care
- Office waiting time
- Freedom to choose providers

Findings from the assessment of the quality of the process of care conducted for the demonstration (Retchin et al., 1988) are not linked with disenrollment data in this study, because the nature of the data from that study does not permit individual plans to be definitively categorized by positive or negative outcomes. It would not suffice to merely add up the total number of times the quality measures were met since that would not account for the relative importance of the various quality measures. For example, with a hypertensive patient, it may be much more important to ensure that the patient's weight was recorded than whether the annual flu vaccine was administered. Consequently, clinical decisions would have to be made in order to weight the data or to select several important measures on the quality of the process of care.

The study on the quality of the process of care concluded that the quality of the process of care provided in the HMOs studied was not significantly different from the care provided in fee-for-service settings. This finding held for assessments of basic care, management of chronic conditions, and management of resource intensive conditions.

The measures that are used in this analysis do not directly measure quality of care, in the sense that, for example, an HMO with exceptionally long waiting times in the physician's office may still be providing high-quality clinical care. Nevertheless, beneficiaries' dissatisfaction with the HMO may make them more reluctant to seek care, perhaps resulting in poorer clinical outcomes, or it may be an indication that the HMO is not sufficiently well organized to serve an older, sicker Medicare population, in general. An HMO's below average rating on any single measure included in this study is not a clear indicator of quality problems, but a below average rating on several measures might describe an HMO with a higher than average probability of quality problems.

A telephone survey from which the data on satisfaction and access are obtained was conducted in the first half of 1986. The full enrollee survey sample consisted of 2,098 Medicare beneficiaries who had enrolled in 1 of 17 Medicare competition demonstration HMOs or CMPs during the last few months of 1984. The survey sample was distributed across the demonstration plans evenly, with the number per HMO/CMP ranging from 112 to 138. Respondents had been enrolled between 14 and 18 months at the time the survey was conducted. The survey completion rate was 72 percent, with deceased beneficiaries, disenrolled beneficiaries, unlocatable beneficiaries, and refusals accounting for the 28 percent of the original sample that did not complete the survey. It also is important to note that each quality indicator used for this analysis is measured at a single point in time (i.e., the time of the beneficiary surveys). The analysis assumes that disenrollment trends over time are related to that point estimate of the quality indicators. This appears to be a reasonable assumption as long as the length of time between the measurement of the quality indicator and the disenrollment rates observed is not extreme. For example, the mix and training of the professional staff probably changes little over time. Thus, it is plausible that, if beneficiaries report dissatisfaction with the professional competence of the HMO staff in 1985, they and other enrollees will probably be dissatisfied the following year (and were probably dissatisfied in 1984). Therefore, the point-in-time measure of perceived quality is reasonable to associate with disenrollment rates in both 1985 and 1986. Other measures (for example, satisfaction with office waiting times) may be susceptible to more rapid change and, therefore, the association of 1986 disenrollment rates with these quality indicators may be somewhat less reliable. The purpose of this analysis is merely to determine whether any apparent associations between disenrollment rates and available quality of care indicators exist.

The extent and range of disenrollments reported in Chapter III provides a basis for assuming that it is reasonable to examine the experience of the demonstration HMOs and CMPs in order to assess the association of quality indicators and disenrollment rates. The disenrollment experience in the risk program from 1985 through 1988 is very comparable to the 1984 to 1986 rates found in the original demonstration plans. In addition, the proportion of disenrollees returning to fee-for-service also is quite similar for the two groups. Therefore, for all measures of quality that are available, both 1985 and 1986 disenrollment rates are calculated and reported.

Of course, caution must be exercised in generalizing results from demonstration HMOs to the program, since risk HMOs must now submit to certain requirements and monitoring of their program that were not in force during the demonstration phase. These additional requirements and monitoring activities could change HMO behavior in a way that might impact on beneficiaries' perceptions of quality and their satisfaction with the care they receive.

C. RESULTS

An overview of the 1985 and 1986 disenrollment rates of HMOs and CMPs that participated in the Medicare Competition Demonstrations is provided in Table IV.1. Disenrollment rates of individual plans ranged from a low of 2.4 percent to a high of 48.7 percent in 1985, with a mean of 11.9 percent; the range in 1986 was from 2.6 percent to 61.9 percent, with a mean of 15.5 percent. The data suggest that

TABLE IV.1

DISENROLLMENT RATES OF HMOs/CMPs THAT PARTICIPATED IN THE MEDICARE COMPETITION DEMONSTRATIONS, 1985 AND 1986

PLAN	DISENROLLMENT RATE* 1985	DISENROLLMENT RATE* 1986
AV-MED (FL)	48.7%	19.9%
CAC (FL)	25.0	29.7
Health America (FL)	15.6	17.7
IMC (FL)	16.9	23.0
Healthway (MA)	3.4	5.8
Medical East (MA)	5.5	6.8
Central Mass. (MA)	3.9	2.6
Fallon CHP (MA)	2.4	2.7
Medical West (MA)	2.9	3.1
FHP (CA)	10.7	14.9
United Health Plan (CA)	32.3	15.3
Health Care Network (MI)	6.8	61.9
Preferred Health Plan (MI)	6.0	8.5
Metropolitan Health (IN)	6.2	7.3
Health Plus of Michigan	3.3	24.6
Genesse Valley (NY)	3.7	4.2
Choice Care (OH)	9.2	Dropped Out[1]

Source: Rossiter et al. (April 1988)

*The disenrollment rate is defined as the ratio of total disenrollments during the year to total enrollment at year-end plus disenrollments. These data are from the Third Annual Report: National Medicare Competition Evaluation, Rossiter et al., (April 1988).

[1] Choice Care terminated its contract at the end of 1985.

there is some consistency from year to year in disenrollment rates for most plans, although four plans experienced substantial changes between 1985 and 1986 as a result of changes in market area definition or to the entry of new competitors into their market area. For example, Health Care Network's disenrollment rate increased drastically from 6.8 percent to 61.9 percent when a new Medicare HMO entered the same market and apparently attracted beneficiaries away. AV-MED, on the other hand, reduced its disenrollment rate between 1985 (48.7 percent) and 1986 (19.9 percent) by withdrawing from a market in which it was experiencing high disenrollments.

The association between measures of beneficiary satisfaction and disenrollment rates is shown in Table IV.2. There are clear differences in the disenrollment rates of plans with an above average proportion of enrollees reporting overall satisfaction with the HMO and the disenrollment rates of plans for which a below average proportion of enrollees report being satisfied. The average disenrollment rate in 1985 was 7.5 percent for plans with more enrollees who reported themselves to be satisfied "overall," and 18.3 percent for plans with fewer satisfied enrollees. In 1986 the differential is in the same direction, but of considerably smaller magnitude: 11.5 percent and 13.8 percent respectively. The same pattern is observed for the individual satisfaction measures presented in Table IV.2. Plans for which an above average proportion of enrollees report favorable assessments of professional competence, courtesy of staff, convenience of appointment, availability of

TABLE IV.2

DISENROLLMENT RATES FOR HMO/CMPs GROUPED BY LEVEL OF BENEFICIARY SATISFACTION, 1985 and 1986

SATISFACTION MEASURE[1]	1985 No. Plans	1985 Rate	1986[2] No. Plans	1986[2] Rate
Overall Satisfaction[3]				
Above Mean	10	7.5%	9	11.5%
Below Mean	7	18.3	6	13.8
Professional Competence[4]				
Above Mean	10	5.4	9	8.5
Below Mean	7	21.3	6	18.3
Courtesy of HMO Staff[4]				
Above Mean	11	7.1	10	10.6
Below Mean	6	20.7	5	16.0
Convenience of Appointment[5]				
Above Mean	12	11.3	10	10.3
Below Mean	5	13.4	5	16.6
Availability of ER Care[6]				
Above Mean	9	10.6	8	12.9
Below Mean	8	13.4	7	11.8
Office Waiting Time[7]				
Above Mean	10	4.8	10	8.1
Below Mean	7	22.1	5	21.1

Table IV.2 (continued)

SATISFACTION MEASURE	1985		1986[2]	
	No. Plans	Rate	No. Plans	Rate
Freedom to Choose Providers[8]				
Above Mean	11	9.3	10	9.6
Below Mean	6	16.7	5	18.0
Total	17	13.0%	15	13.4%

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[1] The survey sample included 2,098 Medicare beneficiaries enrolled in 17 Medicare demonstration HMOs and CMPs in 1985 and 1986. The number of sample members from each of the 17 HMO/CMPs ranged from 112 to 138.

[2] Calculations for 1986 are based on 15 observations. Health Care Network was omitted due to the dramatic increase in its disenrollment rate when a new HMO entered its market area and Choice Care withdrew from the risk program at the end of 1985.

[3] HMOs were classified as having "above mean" satisfaction if the proportion of enrollees from that plan who reported being "very satisfied" or "somewhat satisfied" exceeded the mean rate for all the plans.

[4] Based on the following responses: "excellent" or "good" and "fair" or "poor."

[5] Based on the following responses: "very convenient" or "somewhat convenient" and "somewhat inconvenient" or "very inconvenient."

[6] Based on the following responses: "excellent" or "good" and "fair" or "poor."

[7] Based on the following responses: "very reasonable" or "somewhat reasonable" and "somewhat unreasonable" or "very unreasonable."

[8] Based on the following responses: "great deal of freedom" or "some freedom" and "little freedom" and "no freedom at all."

emergency care, office waiting time, and freedom to choose providers all experienced lower disenrollment rates than was observed for plans for which a below average proportion of enrollees reported being favorably impressed on these measures. It is interesting to note that while the differential narrowed for most of these measures between 1985 and 1986, it remains substantial for all the measures except availability of ER care. The consistency of the direction of the differential in disenrollment rates by satisfaction measure, and of the magnitude of the differential within years, provides some degree of reassurance that the association is an actual one, and not spurious.

Access to care was analyzed in the demonstration by assessing the responsiveness of the HMO to beneficiaries' perception of the need for care. Beneficiaries were asked whether they sought and obtained medical care from the HMO for specific symptoms. The symptoms were grouped into three categories -- urgent, semi-urgent, and non-urgent -- for purposes of comparison, and disenrollment rates were calculated for HMOs/CMPs for which beneficiaries reported above average and below average access rates for each type of symptom. The findings revealed that the overwhelming majority of enrollees who sought care for all three categories of symptoms did indeed receive care, and a comparison of the disenrollment rates of the plans by above average and below average reported access to care did not yield any consistent pattern.

D. DISCUSSION

The results of this exploratory analysis suggest that disenrollment rates may be useful as indicators of potential problems within individual HMOs/CMPs. The clear inverse relationship between satisfaction and disenrollment rates does not necessarily imply that quality of care, however that may be defined, is lower in plans with high disenrollment rates. Nevertheless, to the extent that satisfaction measures, especially those related to professional competence, provide a reasonable guide to actual differences in the quality of care, the results suggest that disenrollment may be an indicator of the adequacy of the care provided. The size and consistency of the differential between disenrollment rates over time and across satisfaction measures provides some support for the hypothesis that beneficiary dissatisfaction with perceived quality of care may be linked with higher disenrollment rates.

With only 17 HMOs/CMPs in the analysis, and relatively small numbers of enrollees per plan, the results reported here should not be viewed as providing firm evidence of the value of using disenrollment rates as a warning signal for quality of care problems in the risk program. Both because of the small numbers of HMOs in the analysis and the fact that these demonstration plans may not be representative of the HMOs/CMPs in the permanent program, these findings are not necessarily generalizable to the risk program. Notwithstanding these limitations, however, the results of this analysis provide important information that may be of use in future program monitoring and research efforts.

V. ANALYSIS OF DISENROLLMENT AND HMO COMPETITION

A. OVERVIEW

Disenrollment rates are important because they are an indicator of enrollee dissatisfaction. Nonetheless, disenrollment also may be an indicator of positive program effects, that is, that the Medicare HMO/CMP risk program is providing Medicare beneficiaries with increased choices, and that beneficiaries are re-assessing their alternatives on a continuing basis. The results of the evaluation of the Medicare Competition Demonstrations indicated that 33 percent of disenrollees eventually (within a 2-month period following disenrollment) joined another HMO, with most beneficiaries reporting that they changed HMOs in order to obtain better benefits, reduce their premiums, or stay with a specific physician.

The analysis of disenrollment resulting from HMO competition is important for a number of reasons. First, competition among HMOs may reflect the degree of competitiveness within the health services market in general. As competition increases, providers and insurers find it necessary to increase the management and cost efficiency of their health services delivery systems, as well as to organize those delivery systems in ways that will attract Medicare beneficiaries and ensure their continued satisfaction. HMOs that are inefficient and/or unresponsive to enrollees will suffer enrollment and/or financial losses.

Disenrollment patterns among HMOs can also provide an indication of which specific HMOs are less responsive to beneficiary needs. For monitoring purposes, HMOs that lose large numbers of enrollees to other HMOs may warrant attention to determine what it is about their system of health care delivery that causes beneficiary dissatisfaction. In general, disenrollment to join another HMO rather than return to fee-for-service arrangements is an indicator of Medicare beneficiaries' satisfaction with the HMO concept, and with their active involvement in Medicare's multiple choice program. Switching to another HMO in order to obtain better benefits, lower out-of-pocket costs, greater convenience and access, or to be in a setting that is perceived to be more responsive to the beneficiary's needs is a desirable consequence of increasing competition in the market for health services.

Chapter III presented rates of disenrollment to other risk HMOs and CMPs, which is an overall indication of Medicare beneficiaries' propensities to remain in an HMO once they join one. Total disenrollment, however, includes those beneficiaries in single-plan markets who are unable to join another HMO, those who move to other areas and then join another HMO, as well as those who switch among multiple HMOs available in a specific market area. To assess the competitiveness of the HMOs and CMPs at a point in time, and over time, it is necessary to restrict the analysis to those market areas in which there are two or more competing HMOs or CMPs.

This chapter examines the extent of competition among risk HMOs and CMPs in multiple-plan markets. Plans are characterized as "net gainers" if they attracted more Medicare beneficiaries from other HMOs than they lost to other HMOs during a given period of time. "Net losers" are those plans that lost more Medicare enrollees to other HMOs than they attracted to their own plan. We look at the distribution of HMOs and CMPs, by their propensity to attract or lose Medicare HMO enrollees, as well as the characteristics of plans that are "net gainers" and "net losers." Finally, the characteristics of Medicare beneficiaries who switch plans in multiple HMO markets are presented, in order to identify the type of beneficiaries most likely to respond to a competitive HMO market by periodically re-assessing their choices.

B. DATA AND METHODOLOGY

The data used to examine disenrollment and HMO competition was drawn from several sources:

- The GHPO enrollments and disenrollments data file was used to identify disenrollees who joined another HMO within 3 months of disenrolling from a risk HMO/CMP. This file also provided a limited amount of data on the characteristics of disenrollees who joined another HMO as well as data on any other HMO enrollment episodes that they may have had.
- HCFA data on the date of entry of specific risk HMOs into the Medicare market, HMO market areas, and organizational characteristics of HMOs in each market, including benefits and premium levels, were used to identify patterns of beneficiary movement among HMOs.

This descriptive analysis of the relationship of competition among HMOs to disenrollment patterns focused on several aspects of disenrollments:

1. For each HMO in a multiple HMO market area, the percent of total enrollments and disenrollments due to HMO switching was calculated for the periods April 1985 through December 1985, January through December 1986, and January through December 1987. Nonrenewing plans were excluded from this analysis.

2. HMOs were classified into "net gainers" and "net losers" of enrollees who switch HMOs, and the characteristics of these two categories of HMOs were examined to determine whether specific types of HMOs are more likely to fall into one or the other category.

3. The characteristics of beneficiaries who switch HMOs were examined and compared with characteristics of disenrollees who return to fee-for-service.

C. RESULTS

The analysis of HMO competition and disenrollment patterns focuses on risk HMOs and CMPs that were operational between April 1985 and December 1987 and did not terminate their Medicare participation during that period. In addition, the study is limited to those HMOs that were operational in multiple HMO markets where HMO competition for enrollees could occur. There were 40 HMOs with risk contracts in 1985, 71 in 1986, and 79 in 1987 that met these criteria.

1. Overall Trends

Table V.1 shows the pattern of HMO switching by beneficiaries from 1985 through 1987. The percent of new HMO enrollees who had been enrolled in another HMO/CMP, within the 3 months preceding a

TABLE V.1

PATTERNS OF HMO SWITCHING BY MEDICARE BENEFICIARIES: 1985 TO 1987

	1985		1986		1987	
Distributions	Average Over All Plans	Maximum For Any One Plan	Average Over All Plans	Maximum For Any One Plan	Average Over All Plans	Maximum For Any One Plan
Percent of New Enrollees Previously Enrolled in Another Risk HMO	1.1	6.1	4.8	41.0	10.2	57.6
Percent of Disenrollees Subsequently Enrolling to Another Risk HMO	27.9	88.7	28.8	86.3	34.3	96.7
Number of HMOs/CMPs*	40		71		79	

*Only active through July 1988 and located in market areas with two or more active risk plans are included.

current enrollment episode, increased from 1.1 percent in 1985 to 10.2 percent in 1987. For the HMO with the greatest success in drawing new enrollees from other risk plans in 1985, 6.1 percent of its new enrollees had switched. In 1986 and 1987, the most successful HMOs attracted 41 percent and 58 percent of their enrollees from other risk HMOs and CMPs. Clearly, the proportion of new enrollments coming from the existing HMO enrollee population has been increasing over time. This is particularly noteworthy since the analysis excluded nonrenewing HMOs' enrollees who might be most likely to seek a new HMO arrangement. The patterns reported in Table V.1 represent only enrollee switching among active, continuously operating risk HMOs and CMPs. In part, the pattern of increasing HMO switching over time is due to the larger numbers of enrollees over time in HMOs and CMPs. As this number grows, there is a larger pool of beneficiaries who can switch to other HMOs when new options appear. This was particularly true in 1985 and 1986 when enrollment still was growing rapidly. By 1987, new enrollment growth overall was slowing, and this slower growth may account for the higher proportion of new enrollees coming from other plans. Table V.2 shows the distribution of HMOs and CMPs by the proportion of their disenrollees switching to other risk plans. In 1985, half of the plans lost less than 15 percent of their disenrollees to other plans; by 1987, in only one-third of plans was disenrollment due to switching in the 15 percent or less range. Similarly, while less than 10 percent of 1985 plans lost half or more of their disenrollees

TABLE V.2

DISTRIBUTION OF PLANS BY PERCENT OF DISENROLLEES
SWITCHING TO ANOTHER PLAN: 1985 TO 1987

Percent of HMO's Disenrollees Joining Another Risk HMO	1985		1986		1987	
	Number of Plans in Category	Percent	Number of Plans in Category	Percent	Number of Plans in Category	Percent
Less than 5%	9	22.5	6	8.5	8	10.1
5 - 14	12	30.0	12	16.9	19	24.1
15 - 24	5	12.5	24	33.8	19	24.1
25 - 49	11	27.5	19	26.8	21	26.6
50 - 74	1	2.5	8	11.3	9	11.4
75 and Over	2	5.0	2	2.8	3	3.8
Total	40		71		79	

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*Only plans active through July 1988 and located in market areas with two or more active risk plans are included.

to another HMO; by 1987, the proportion of plans in this category had doubled.

2. Characteristics of "Net Gainers" and "Net Losers"

For 1987, the 79 operational HMOs and CMPs were classified into categories of "net gainer" and "net loser." A net gainer is an HMO that attracted more new enrollees from other risk plans than it lost to other plans during the calendar year. A net loser lost more enrollees to other plans than it attracted. In Table V.3, net gainers and net losers are categorized by organizational characteristics of the plans. Overall, there were 43 net gainers and 36 net losers among the 79 HMOs and CMPs that were examined. Group model HMOs and CMPs were by far the most likely to be net gainers and Staff model plans were most likely to be net losers. IPAs were nearly evenly divided between net gainers and net losers, and accounted for the majority of plans in both categories. There was little difference in the proportion of net gainers and net losers by profit status or by whether the plan was affiliated with a chain.

When the proportion of plans that are net gainers and net losers is examined by the HMO/CMP date of entry into the Medicare market, however, a distinct pattern is observed. Those plans that entered in 1985 were, on average, likely to have lost more enrollees than they gained from other plans, while those that entered in 1986 and 1987 were less likely to be in the net loser category. This finding may be due in part to the fact that a new entrant has no initial enrollment base from which to lose enrollees to other HMOs.

TABLE V.3

CHARACTERISTICS OF RISK HMOS: "NET GAINERS" AND "NET LOSERS" OF MEDICARE DISENROLLEES, 1987

Characteristics	Number[a]	Net Gainer[b]		Net Loser[c]	
Model					
Staff	15	5	33.3	10	66.7
Group	20	15	75.0	5	25.0
IPA	44	23	52.3	21	47.8
Profit Status					
Non Profit	52	28	53.9	24	46.2
For Profit	27	15	55.6	12	44.5
Affiliation					
Chain	54	29	53.7	25	46.3
Independent	25	14	56.0	11	44.0
Date of Medicare Entry					
1985	40	18	45.0	22	55.0
1986	31	19	61.3	12	38.8
1987	8	6	75.0	2	25.0
Medicare Enrollment					
999 and less	9	8	88.9	1	11.2
1,000 - 4,999	33	9	27.3	24	72.8
1,000 - 9,999	14	10	71.4	4	28.6
10,000 - 19,999	15	9	60.0	6	40.0
100,000 or more	8	7	87.6	1	12.6
Total Plan Enrollment					
unavailable	14	7	50.0	7	50.0
19,999 and less	9	6	66.7	3	33.3
20,000 - 49,999	13	5	38.5	8	61.6
50,000 - 99,999	16	8	50.0	8	50.0
100,000 or more	27	17	62.9	10	37.0
Total	79	43	54.5	36	45.6

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[a] Only plans active through July 1988 and located in market areas with two or more active risk plans are included.

[b] Plans are classified as "net gainers" if they attracted more new enrollees from other HMOs than they lost to other HMOs.

[c] "Net Losers" are risk plans that lost more enrollees to other plans than they attracted from other risk plans.

This, however, is a fairly short-term phenomena; the results of the demonstration evaluation indicated, for example, substantial disenrollment to other HMOs in the South Florida area for HMOs and CMPs within a year of start-up (Brown, 1987). It does appear that risk HMOs and CMPs that have been active for a longer period of time may be susceptible to losing their enrollees when a new HMO or CMP offering an attractive benefit package or premium enters the Medicare market. The new HMO may attract physicians who were previously affiliated with the first plan and enrollees may switch to follow their physician. In addition, it seems likely that Medicare HMO enrollees may become adept, over time, at assessing the characteristics of different HMO benefit packages and gauging which offers the best alternative. The increased sophistication of beneficiaries could result in more HMO shifting, particularly if the HMOs from which they are able to choose contract with many of the same physicians.

When the proportion of net gainers and net losers is examined by the size of their Medicare enrollment, no clear pattern emerges except that it appears that the plans with the smallest Medicare enrollment and those with the largest Medicare enrollment are most likely to be net gainers. Also no clear pattern emerges of a relationship between total HMO enrollment -- both Medicare and non-Medicare -- and the ability of the HMO to attract enrollees from other HMOs or to retain their members when new HMOs become available.

3. Characteristics of Disenrollees to Other HMOs

If HMOs and CMPs are competing among themselves for beneficiaries already enrolled in risk plans (as well as for those not currently enrolled), it also is interesting to examine the characteristics of those beneficiaries who do change HMOs. Studies from the demonstration evaluation indicated that those Medicare beneficiaries who enrolled in another risk plan were younger and had lower expenditures for health care prior to joining the HMO than beneficiaries who disenrolled to fee-for-service arrangements. In fact, disenrollees to other HMOs also appeared healthier on average than the full group of beneficiaries who enrolled initially (Langwell, Hadley, and Tucker, 1989). If that has remained true during the risk program period, then competition among HMOs for enrolled beneficiaries would result, in the successful HMO/CMP, attracting a particularly healthy and potentially less costly group of enrollees to their HMO. Although data on only those characteristics included in the AAPCC are available from the GHPO files (unlike the demonstration evaluation which had detailed health status data), it is reasonable to assume that if patterns similar to those in the demonstration evaluation study are found, then disenrollees to other HMOs/CMPs also may be a healthier group.

To examine this issue, the characteristics of disenrollees who joined another HMO were compared with characteristics of all disenrollees in multiple-plan markets for the 1985, 1986, and 1987 calendar years. Disenrollees from nonrenewing plans were excluded from the analysis. Results are shown in Table V.4 and summarized below.

- Older disenrollees -- those aged 80 and over --were somewhat less likely to disenroll to another plan, in all 3 years. Younger disenrollees were more likely than others to join another plan in 1985, but this difference declined in 1986 and 1987.
- No consistent pattern appeared for Medicaid-eligible disenrollees, who had a lower rate of switching than others in 1985, a higher rate in 1986, and the same rate of switching to another HMO/CMP in 1987.
- Institutionalized beneficiaries were a very small proportion (0.5 percent) of all disenrollees, but were consistently much more likely to disenroll to another HMO than were other disenrollees.
- Black Medicare enrollees were much more likely than other disenrollees to join another HMO/CMP with a risk contract.
- Male disenrollees were slightly more likely than female beneficiaries, to join another HMO/CMP.

The patterns of beneficiary characteristics, by new arrangements for care, observed in multiple plan markets were quite similar to those reported in Chapter III for all disenrollments in all plans. Older, noninstitutionalized, or nonblack disenrollees were more likely to return to fee-for-service arrangements. Institutionalized, black, or disabled disenrollees were more likely to join another plan.

It is not obvious from these data what effect, if any, competition among HMOs in multiple-plan markets has on favorable

TABLE V.4

CHARACTERISTICS OF BENEFICIARIES DISENROLLING TO JOIN ANOTHER RISK HMO/CMP, MULTIPLE-PLAN MARKETS: 1985, 1986, AND 1987

Characteristics	1985		1986		1987	
	All Disenrollees	Disenrollees Joining Another HMO	All Disenrollees	Disenrollees Joining Another HMO	All Disenrollees	Disenrollees Joining Another HMO
All Disenrollees	100.0%	27.9%	100.0%	28.8%	100.0%	34.3%
Age						
under 65	7.2	27.1	6.6	35.2	5.4	36.8
65 to 69	32.4	31.2	33.6	30.1	33.3	34.1
70 to 74	24.4	28.6	24.4	28.4	24.6	35.8
75 to 79	17.7	27.4	18.0	27.4	18.9	35.2
80 to 84	11.1	22.9	10.8	26.4	11.2	31.4
85 and over	7.2	21.0	6.6	23.8	6.6	29.7
Welfare Status						
Not eligible	92.2	28.3	92.3	28.1	94.9	34.2
Eligible	7.8	23.9	7.7	36.0	5.1	36.2
Unknown	0.1	23.5	0.0	17.4	0.0	13.3
Institutional Status						
Not institutionalized	99.8	27.9	99.8	28.6	99.9	34.2
Institutionalized	0.2	67.2	0.2	71.8	0.1	65.8
Race						
White	81.3	25.9	77.9	23.8	85.3	31.9
Black	13.9	39.3	16.6	54.0	10.3	57.3
Other	2.1	24.3	3.1	21.8	2.1	25.9
Unknown						
Sex						
Male	44.0	29.2	44.1	31.6	43.3	36.6
Female	56.0	26.9	55.9	26.5	56.7	32.5

selection into risk HMOs and CMPs. While older beneficiaries, who may be most at risk for high-cost illnesses, were less likely to disenroll to another plan, institutionalized beneficiaries were disproportionately more likely to switch to another HMO. Institutionalized beneficiaries are, presumably, among the higher-cost enrollees in HMOs, and it seems that their propensity to switch among HMOs, rather than return to fee-for-service, may be related to the somewhat more generous long-term care benefits offered by HMOs (i.e., waiving the 3-day prior hospital stay requirement and, in some instances, providing 365 day skilled nursing facility coverage). The higher tendency for black disenrollees to join another plan could contribute toward unfavorable selection into the receiving plan if blacks, as discussed previously, have long-term unmet needs for care. Those unmet needs could make them higher user in HMOs that have reduced financial access barriers. This hypothesis is consistent with the results of a study by Brown and Langwell (1987), who found that 20 percent of Medicare beneficiaries with characteristics that suggested they faced financial barriers to access to care joined a demonstration HMO when it became available, compared with less than 1 percent of those with characteristics indicating low financial barriers to access. It seems likely that these previously low-access beneficiaries would be inclined to remain enrolled in some risk plan, even if they became dissatisfied with their original HMO or CMP.

D. DISCUSSION

The evidence presented in this chapter indicates that a substantial fraction of disenrollment from risk HMOs/CMPs is due to Medicare beneficiaries switching to another plan. During the Medicare Competition Demonstrations, approximately 25 percent of disenrollees joined another HMO within 2 months of leaving the first HMO. The 1985 through 1987 experience reported in Chapter III appears to be consistent with the pattern that was observed during the demonstration period. Overall, the percent of disenrollees switching to another risk HMO or CMP was 27 percent in 1985 and 1986, and rose to 33 percent in 1987, among plans that were operational during this period and had not terminated their contracts. If terminated plans had been included in the analysis, it is likely that the proportion of disenrollees switching to another risk plan would be even higher, since those who had been pleased with their HMO experience would presumably seek another to join.

The slight increase in the proportion of disenrollees who joined another risk plan between 1985 and 1987 may suggest that beneficiaries are becoming more sophisticated in assessing the relative attractiveness of the benefit packages offered by different Medicare HMOs. It may be that the initial decision to join an HMO leads, over time, to greater familiarity with variations among HMOs. In addition, once a beneficiary is actually in an HMO, then there may be a greater propensity to compare the packages offered by new HMOs entering the Medicare market to those of the first HMO.

There was an increase in the number of competitive markets and in the number of plans within markets during the period of study. There also appears to have been some switching of physicians among different HMOs, and some beneficiaries indicated that their principal reason for enrolling in a new HMO was that their primary physician had left the previous HMO (Langwell, Hadley, and Tucker, 1989). In addition, physicians may hold concurrent contracts with more than one HMO, permitting beneficiaries to move among these HMOs freely. Finally, it also is likely that as new HMOs entered the market -- particularly in 1986 -- more choices were available for Medicare beneficiaries to assess and compare, stimulating more switching over time.

Comparing characteristics of beneficiaries who joined other plans to those of all disenrollees, however, did not reveal a clear pattern that would support the notion that competition among HMOs for already-enrolled beneficiaries allows those HMOs that are successful in attracting enrollees from other HMOs to increase favorable selection in their plans. The results do suggest that those more likely to stay in the program, although disenrolling from their original plan, may be beneficiaries who face financial access barriers under the standard Medicare fee-for-service option.

The evidence that suggests that risk HMOs and CMPs that have been in the Medicare market for a longer time are more likely than later entrants to have lost more enrollees to other HMOs than they have attracted from them may indicate that experience with the higher-use patterns of Medicare beneficiaries has caused these HMOs to reduce their benefits and/or increase premiums and copayments. New HMOs entering the Medicare market may offer more attractive packages, because of lack of experience or for strategic reasons; however, as they gain greater experience, these new HMOs may find it necessary to increase premiums and to reduce benefits. At that point, they become vulnerable to even newer entrants to the program who attempt to draw enrollees from existing Medicare HMOs. The competitive process in the risk HMO/CMP program appears to be a dynamic one, based on the limited evidence available during the first 3 years of the program. Over time, the nature of competition in this market may be more fully explored as more data become available and longer-term patterns emerge.

VI. SUMMARY AND CONCLUSIONS

A. SUMMARY

The review and analysis presented in this report provides information on the patterns of disenrollment between 1985 and 1988, and on some of the factors that may be affecting disenrollment. These results can be used for future monitoring and oversight of the program, as well as indicating the current status of Medicare beneficiaries' participation in risk contract HMOs and CMPs.

Overall, the findings show that Medicare beneficiaries have made considerable use of the disenrollment option. Between April 1985 and July 1988, Medicare beneficiaries had 835,862 enrollments in the 118 risk HMOs and CMPs that were still in operation as of July 1988. One out of five of these enrollees chose to voluntarily disenroll from the HMO within a year following enrollment and, by the end of the second year after joining, one out of three enrollees who joined by mid-1986 had disenrolled. Thirty-eight HMOs that had terminated their contract by July 1988 had an additional 113,731 enrollees between April 1985 and July 1987, each of which subsequently disenrolled voluntarily or involuntarily.

When time between HMO/CMP enrollment and disenrollment was examined, the data indicate that approximately 7 percent of Medicare beneficiaries disenrolled within the first 3 months after enrollment. The fact that this percentage has remained about the same over the entire 1985 to 1988 period and is similar to the pattern observed during the demonstration period is a particularly interesting finding because it suggests that Medicare beneficiaries may still be enrolling without a full understanding of the HMO/CMP "lock-in" rules and other issues. Alternatively, it may be that the 1-month disenrollment option, which allows Medicare beneficiaries the flexibility to try out the HMO or CMP for a short time, encourages the enrollment of beneficiaries who may be fully informed about the restrictions that go along with plan membership but have reservations about how satisfied they will be with the HMO delivery system. These beneficiaries may be willing to try HMO enrollment, knowing that they are not required to make a commitment to long-term membership.

Over 28 percent of the 1985 to 1988 disenrollees switched to another HMO, and this fraction grew during that period, from 27 percent of disenrollees in 1985 to 33 percent in 1987. This suggests that beneficiaries are taking advantage of the expanding range of choices available to them.

The potential value of using disenrollment rates as an indicator of perceived quality of care was explored, using measures developed for the evaluation of the Medicare Competition Demonstrations. This analysis revealed a consistent pattern of higher disenrollment rates in those HMOs and CMPs in which continuing enrollees had reported below average satisfaction with selected dimensions of quality of care, suggesting that potential quality of care problems in the plans might be identified by analyzing changes in disenrollment rates for individual plans over time and by comparing individual plan disenrollment rates with the average rates for similar types of plans.

Disenrollment rates also may be an indicator of the extent of competition among HMOs and of Medicare beneficiaries' increasing knowledge of the differences among risk plans. Analysis of the markets in which risk plans are operating revealed that 89 percent of disenrollees have at least one other risk HMO/CMP available to them. In addition, 10 percent of disenrollees from plans that are in single plan markets actually enroll in another risk HMO or CMP -- presumably because they move to another area with a risk plan. Thus, 90 percent of disenrollees have the option to switch to another HMO, rather than to return to fee-for-service. Of these, 31 percent do choose to enroll in another HMO or CMP and 69 percent return to fee-for-service arrangements. By 1987, approximately 10 percent of new enrollees in plans in competitive markets had been previously enrolled in another plan.

B. CONCLUSIONS

A number of conclusions can be drawn from the analyses reported here:

- Overall, approximately 20 percent of Medicare enrollees will have disenrolled from the plan they joined within 1 year of enrollment, with the proportion rising to approximately 33 percent by the end of a 2-year period. This suggests the need to study the implications of disenrollment patterns for HCFA's HMO payment policy.
- Greater efforts are needed to ensure that Medicare beneficiaries understand the HMO "lock-in" and other aspects of the HMO style of health services delivery. This could be useful as a means of reducing the proportion of beneficiaries who enroll and then disenroll within a few months.

- High disenrollment rates and, particularly, increases in disenrollment rates, may indicate beneficiary perceptions of quality of care problems in their plan.
- High disenrollment rates may indicate that there is competition among plans for Medicare enrollments. In addition, the increasing proportions over time of disenrollees who joined other HMOs and CMPs suggest that beneficiaries are becoming more knowledgeable of HMO options as they gain greater experience with their choices.

The disenrollment option within the program may be unique to Medicare. Other HMO enrollees are held to their insurance/delivery system choices for a year, in most cases. It is clear that the flexibility offered by the disenrollment option contributes to the relatively high disenrollment rates reported above. On the other hand, this flexibility may be valuable in permitting Medicare beneficiaries to "try out" an HMO that they would otherwise be reluctant to join if they had to commit to their decision for a year. The disenrollment option also may be a safety valve for the HMO/CMP risk program. If an HMO develops financial or management problems that have an impact on quality of care or access to care, beneficiaries have the opportunity to make alternative health care arrangements soon after such problems surface. High disenrollment rates, however, may have a cost to beneficiaries (in terms of discontinuity of care and supplemental coverage) and to HMOs. The trade-off between higher disenrollment rates and the safety valve role of flexible disenrollment is difficult to assess.

The relationship detected between disenrollment rates and beneficiaries' satisfaction with quality dimensions of HMO services provides support for the continued use of disenrollment rates, and changes in disenrollment rates, as indicators of possible problems within specific HMOs and CMPs. HCFA's ongoing monthly monitoring of disenrollment rates in risk HMOs and CMPs and preparation of exceptions reports by HCFA provides information on these rates to regional offices with oversight responsibilities for individual plans. The beneficiary complaint tracking system and disenrollment surveys of HCFA also offer a means for identifying HMOs and CMPs that may warrant attention by regional office HMO coordinators, particularly when combined with data from HCFA's monthly disenrollment activity report.

Finally, it appears that the introduction of HMOs into the Medicare market has increased the level of competition in the program. A substantial amount of disenrollment occurs in markets where two or more plans are available to Medicare beneficiaries. In these areas, over 30 percent of disenrollments occur due to beneficiaries switching among these plans. The program offers choices to Medicare beneficiaries and the extent of switching among plans provides evidence that beneficiaries are assessing the options available to them and choosing the alternative that best meets their requirements for health care and financial coverage, at a particular point in time.

HCFA has, over several years, initiated and developed research efforts related to issues of quality of care, beneficiary satisfaction, and competition among HMOs and CMPs. Currently, these issues are being examined as part of a comprehensive evaluation of the HMO and CMP risk program. Preliminary results from this evaluation will be disseminated as they become available, with a final report on the evaluation expected April 30, 1992.

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APPENDIX A

Health Care Financing Administration, "HMO Disenrollment Survey Instrument"

HMO DISENROLLMENT SURVEY

NOTE: The following questions address the reasons you cancelled membership in your Medicare HMO. The questions ask only about the HMO you recently left. They do not apply to any private Medigap insurance policy you may have. Please be sure to answer each question. If an item does not apply to you, answer N/A.

(1) 1. How long were you a member of the HMO? (Estimate if you are not exactly sure.)

_______ months

(2) 2. Did you ever use the services of the HMO? Yes ____ No ____

(3) If no, please indicate why not and return this form to the Medicare program. ____

____

____

(4) 3. After leaving your HMO, did you join another Medicare HMO?

Yes ____ No ____

If No, was there another Medicare HMO available?

(5) Yes ____ No ____

(6) 4. Did you maintain a private Medicare supplemental policy (a health insurance plan that pays for costs that Medicare does not cover) while you were a member of the HMO?

Yes ____ No ____

(7) 5. Compared to other people your age, would you say that at the time of your enrollment, your health was:

____ Excellent
____ Good
____ Fair
____ Poor

6. Did any of the following items apply to your experience in the HMO? Please respond to each item in both columns.

If any item was a major reason for your disenrollment, also please check the box in the right hand column next to that item(s).

8) a. My premiums increased and/or benefits changed. Yes ____ No ____ [ ]

9) b. It was too far to travel to get treatment. Yes ____ No ____ [ ]

10) c. It was difficult to get appointments. Yes ____ No ____ [ ]

11) d. There was a long wait to get treatment after arriving at the HMO doctor's office. Yes ____ No ____ [ ]

12) e. Another HMO had a better premium and/or benefits. Yes ____ No ____ [ ]

13) f. I did not like the choice of hospitals. Yes ____ No ____ [ ]

14) g. It was difficult to see specialist doctors (a heart doctor, surgeon, etc.) Yes ____ No ____ [ ]

5) h. You were notified that your HMO would no longer be under contract with Medicare. Yes ____ No ____ [ ]

6) i. A particular health service I felt I needed was not available. Yes ____ No ____ [ ]

7) If yes, what service ________________
____
____

8) j. I had to see a different doctor for routine care each time I went to my HMO. Yes ____ No ____ [ ]

9) k. My doctor was not always available at the same office. Yes ____ No ____ [ ]

0) l. My doctor left the HMO. Yes____ No ____ [ ]

1) m. I was too often seen by health professionals other than doctors. (for example, nurses or physician assistants). Yes____ No ____ [ ]

2) n. I did not realize I had joined an HMO. Yes____ No ____ [ ]

3) o. I did not like the choice of doctors. Yes____ No ____ [ ]

24) p. I moved out of the HMO area. Yes____ No ____ [ ]

25) q. I was not treated courteously. Yes____ No ____ [ ]

26) r. My preferred hospital withdrew from the HMO. Yes____ No ____ [ ]

27) s. I was urged to leave the HMO to get needed medical treatment. Yes____ No ____ [ ]

28) 7. During the last year that you were a member of the HMO, about how many days were you a patient in a nursing home? Indicate none, if never in a nursing home. ________ days

7a. If yes:

9) 1. How soon after you enrolled were you admitted to a nursing home? within _____ months

0) 8. During the period that you were a member of the HMO, how many days did you receive care at home? Indicate none, if no home care received. _________ days

1) 9. When you were a member of the HMO, did you ever go see your regular HMO doctor? Yes____ No ____

9a. If yes:

2) 1. How soon after you enrolled did you first see this doctor? _________ months

3) 10. During the last year that you were in the HMO, indicate how often you went to see your regular HMO doctor. (ESTIMATE if you are not exactly certain.)

____ Less than 4 visits per year
____ 4-12 visits
____ 13-24 visits
____ more than 24 visits

(34) 11. When you were a member of the HMO, did your regular doctor ever send you to see a specialist for special care (e.g., heart doctor, surgeon)? Yes ____ No ____

11a. If yes:

(35) 1. How soon after you enrolled did you first see this specialist doctor? ________ months

2. If yes:

During the last year that you were in the HMO, indicate, how often you went to see this specialist doctor? (ESTIMATE if you are not exactly certain.)

(36)
____ Less than 4 visits per year
____ 4-12 visits
____ 13-24 visits
____ more than 24 visits

(37) 12. When you were a member of the HMO, did you ever choose to go outside of the HMO for medical care, even if it meant you had to pay for it yourself? DO NOT COUNT EMERGENCIES. Yes ____ No ____

12a. If yes:

(38) 1. How many months after you enrolled did you use services? __________ months

(39) 2. Indicate why you went outside the HMO for health care.

____ I wanted to use a doctor who was not in the HMO.
____ I could not get services quickly enough.
____ The HMO did not cover the care I wanted.
(40) ____ Other (please describe) ______________________________
____
____

(41) 13. When you were a member of the HMO, did you ever go to the hospital and stay there for one night or more? Yes ____ No ____

(42) 13a. If yes, how many months after you enrolled were you first hospitalized? __________ months

43) 14. During the last year that you were a member of the HMO, indicate how many separate times you were in the hospital overnight. Indicate none, if never hospitalized. __________ times

44) 15. Indicate how many times you saw a doctor in the first 3 months after you left the HMO. Indicate none, if no doctor was seen. __________ times

5) 16. Within 3 months after you left the HMO, how many days did you spend in the hospital? Indicate none, if you did not go to the hospital. __________ days

17. Overall how would you rate your satisfaction with the following aspects of the HMO?

6) a. Your ability to get the medical care you needed.

___excellent ___very good ___good ___fair ___poor

7) b. The quality of the medical care you received from the HMO.

___excellent ___very good ___good ___fair ___poor

8) c. The benefits provided by the HMO.

___excellent ___very good ___good ___fair ___poor

9) d. The cost to you of being in the HMO.

___excellent ___very good ___good ___fair ___poor

0). e. The cleanliness and appearance of HMO facilities.

___excellent ___very good ___good ___fair ___poor

18. Indicate whether any of the following individuals told you to leave your HMO to get needed medical care.

1) a. An HMO doctor or other HMO health professional Yes____ No ____

2) b. Administrative staff of the HMO Yes____ No ____

3) c. A doctor not associated with the HMO Yes____ No ____

4) d. A friend or relative Yes____ No ____

5) 1. Indicate how many months after you enrolled that you were encouraged to disenroll. __________months

(56) 19. Do you believe the information given to you by the HMO or its representatives before you joined the HMO accurately described how the HMO worked and the benefits it covered? Yes____ No ____

(57) 19a: If no, please describe how it could have been better.

____

____

____

(58) 20. Compared to other people your age, would you say that at the time of your disenrollment from this plan, your health was:

___excellent ___good ___fair ___poor

That ends the survey. Thank you again for your help. Please mail your response back to the Medicare program as soon as possible.

APPENDIX B

CHARACTERISTICS OF HMOS INCLUDED IN THIS REPORT

Analyses in Chapter III presented disenrollment rates by a number of HMO characteristics, including model type, profit status, chain affiliation, and plan size. Tables B.1 and B.2 contain data characteristics for HMOs that were active from date of first enrollment through July 1988. In addition to current and previous plan names, Table B.1 contains information from HCFA reports on model type, profit status, and chain affiliation. The characteristics from HCFA reports on model type, profit status, and chain affiliation. The characteristics for each year are for the month of December of the respective year. Table B.2 contains information on total plan enrollment (Medicare and non-Medicare) from InterStudy reports as well as total Medicare enrollments from HCFA reports. Data are from December of the corresponding year as described above, except for total plan size for "1987" which is actually from January 1988.

TABLE B.1

STATE	PLAN NAME	GROUP HEALTH PLAN NUMBER(S) b	START DATE c	TERMINATE DATE	1985 CHARACTERISTICS d			1986 CHARACTERISTICS d			1987 CHARACTERISTICS d		
					MODEL TYPE	PROFIT STATUS	CHAIN AFFIL.	MODEL TYPE	PROFIT STATUS	CHAIN AFFIL.	MODEL TYPE	PROFIT STATUS	CHAIN AFFIL.
AR	FHP of Arizona	H0303	3/86	N/A	--	--	--	IPA	FP	FHP	IPA	FP	FHP
CA	Protective, Peak Health Plan as of 3/88	H0503-H052	12/85	N/A	GROUP	FP	PEAK	GROUP	FP	PEAK	GROUP	FP	PEAK/UNITED
CA	Children's Hospital	H0517	9/85	N/A	STAFF	NP	--	STAFF	NP	--	STAFF	NP	--
CA	AV-MED, National Med, Inc. as of 10/88	H0519	4/86	N/A	--	--	--	IPA	FP	NME	IPA	FP	NME
CA	Inland HP	H0523	7/86	N/A	--	--	--	IPA	NP	--	IPA	NP	PARTNERS
CA	Kaiser/Southern	H0524	9/87	N/A	--	--	--	--	--	--	GROUP	NP	KAISER
CA	Bay Pacific	H0541-H0547	2/86	N/A	--	--	--	IPA	FP	--	IPA	FP	--
CA	PacifiCare, Secure Horizons as of 3/87	H0543	8/85	N/A	IPA	FP	PAC CARE	IPA	FP	PAC CARE	IPA	FP	PAC CARE
CA	Intervalley	H0545	5/86	N/A	--	--	--	IPA	NP	--	IPA	NP	--
CA	United Health Plan (Watts)	H9016	4/85	N/A	GROUP	NP	--	GROUP	NP	--	GROUP	NP	--
CA	FHP	H9030	4/85	N/A	GROUP	NP	FHP	GROUP	NP	FHP	GROUP	NP	FHP
CA	Health Care	H9037	4/85	N/A	GROUP	NP	--	GROUP	NP	--	GROUP	NP	--
CA	French Hospital	H9048-H0549	4/85	N/A	STAFF	NP	--	STAFF	NP	--	STAFF	NP	--
CO	HMO of Colorado, Denver	H0603	1/86	N/A	--	--	--	IPA	NP	BC	IPA	NP	BC CO
CO	Peak HP LTD RC	H0607	2/86	N/A	--	--	--	GROUP	FP	PEAK	GROUP	FP	UNITED
CO	CompreCare, Inc.	H0609	6/86	N/A	--	--	--	IPA	FP	AMI	IPA	FP	AMI
CO	Kaiser Colorado	H0630	1/86	N/A	--	--	--	STAFF	NP	KAISER	STAFF	NP	KAISER
CT	Physician Health Serv.	H0708	7/85	N/A	IPA	NP	--	IPA	FP	--	IPA	FP	--
FL	Health Options - Jacksonville	H1011	2/86	N/A	--	--	--	NETWORK	FP	BC FL	IPA	FP	BC FL
FL	Network Health Plan	H1012	6/86	N/A	--	--	--	NETWORK	NP	--	IPA	NP	--
FL	Heritage	H1013	6/87	N/A	--	--	--	--	--	--	IPA	FP	HERITAGE
FL	Florida HCP	H1035	12/85	N/A	STAFF	FP	--	STAFF	FP	--	STAFF	FP	--
FL	Humana - Jacksonville	H1090	10/86	N/A	--	--	--	IPA	FP	HUMANA	IPA	FP	HUMANA
FL	CAC	H9011	4/85	N/A	STAFF	FP	--	STAFF	FP	--	STAFF	FP	--
FL	AV-MED	H9012-H1016	4/85	N/A	IPA	FP	NME	IPA	FP	NME	IPA	FP	NME
FL	Health Options of South Florida	H9026-H1026	4/85	N/A	GROUP	NP	--	GROUP	NP	BC FL	GROUP	NP	BC FL
FL	IMC, Humana Medical Plan, 6/87	H9050-H1036	4/85	N/A	NETWORK	FP	--	NETWORK	FP	--	IPA	FP	--
FL	Health America - Broward, Maxicare/ Hlth America, 6/87	H9058-H1041	4/85	N/A	STAFF	NP	HLTH AMER	STAFF	NP	MAXICARE	STAFF	NP	MAXICARE
GA	Kaiser of Georgia	H1105	12/86	N/A	--	--	--	GROUP	NP	KAISER	GROUP	NP	KAISER
HA	HMSA - Honolulu	H1203	7/86	N/A	--	--	--	IPA	NP	HMSA/BC	IPA	NP	HMSA/BC
HA	Kaiser FHP - Honolulu	H1230	4/86	N/A	--	--	--	STAFF	NP	KAISER	STAFF	NP	KAISER
IL	Michael Reese Health Plan	H1406	6/85	N/A	STAFF	NP	--	STAFF	NP	--	STAFF	NP	--
IL	HMO Great Lakes	H1409	2/86	N/A	--	--	--	IPA	FP	USHCS	IPA	FP	--
IL	Health Chicago	H1411	1/86	N/A	--	--	--	IPA	FP	MAXICARE	IPA	FP	--
IL	Anchor	H1432-H1434	9/85	N/A	STAFF	NP	--	STAFF	NP	--	STAFF	NP	--
IL	Share Illinois	H9045	4/85	N/A	STAFF	FP	UNITED	STAFF	FP	UNITED	STAFF	FP	UNITED
IN	Key Health Plan	H1505	4/86	N/A	--	--	--	IPA	NP	--	IPA	NP	--
IN	Metro Health	H9028	4/85	N/A	STAFF	FP	HLTH AMER	STAFF	FP	MAXICARE	STAFF	FP	MAXICARE
IA	Share Iowa	H1601	8/85	N/A	IPA	FP	UNITED	IPA	FP	UNITED	IPA	FP	UNITED
KS	HMO Kansas, Wichita	H1701	5/86	N/A	--	--	--	IPA	NP	BC KS	IPA	NP	BC KS
KS	HMO Kansas, Topeka	H1702	1/86	N/A	--	--	--	IPA	NP	BC KS	IPA	NP	BC KS
KS	HealthCare Plus, Wichita	H1708	9/85	N/A	IPA	FP	HCA	IPA	FP	HCA	IPA	FP	EQUICOR
KS	HMO Kansas, Kaw. Valley	H1710	2/86	N/A	--	--	--	IPA	NP	BC KS	IPA	NP	BC KS
KS	HMO Kansas, South Central	H1712	3/86	N/A	--	--	--	IPA	NP	BC KS	IPA	NP	BC KS
MD	CareFirst	H2101	5/86	N/A	--	--	--	GROUP	FP	--	GROUP	FP	--
MD	HealthPlus	H2103	8/85	N/A	IPA	FP	--	IPA	FP	SANUS	IPA	FP	SANUS
MD	Kaiser Mid-Atlantic	H2106	7/87	N/A	--	--	--	--	--	--	GROUP	NP	KAISER
MD	MD - IPA	H2132	3/86	N/A	--	--	--	IPA	FP	--	IPA	FP	--
MA	Multigroup Health Plan	H2204	7/85	N/A	GROUP	NP	--	GROUP	NP	--	GROUP	NP	--
MA	Tufts Assoc. Health Plan	H2205	6/85	N/A	IPA	NP	--	IPA	NP	--	IPA	NP	--
MA	Harvard Community Health Plan	H2206	6/85	N/A	STAFF	NP	--	STAFF	NP	--	STAFF	NP	--
MA	Valley Health Plan -	H2207-H2217	1/86	N/A	--	--	--	GROUP	NP	--	GROUP	NP	KAISER

je 2 'd)

TAB 1

					1985 CHARACTERISTICS d			1986 CHARACTERISTICS d			1987 CHARACTERISTICS d		
STATE	PLAN NAME	GROUP HEALTH PLAN NUMBER(S) b	START DATE c	TERMINATE DATE	MODEL TYPE	PROFIT STATUS	CHAIN AFFIL.	MODEL TYPE	PROFIT STATUS	CHAIN AFFIL.	MODEL TYPE	PROFIT STATUS	CHAIN AFFIL.
MA	Community HP (Hillcrest)	H2209	5/86	N/A	--	--	--	NETWORK	NP	CAP. AREA	IPA	NP	CAP. AREA
MA	Massachusetts Health Plan	H2210	9/85	N/A	IPA	NP	--	IPA	NP	BC/MA	IPA	NP	BC/MA
MA	LaHey Clinic	H2211	2/86	N/A	--	--	--	GROUP	NP	BC/MA	GROUP	NP	BC/MA
MA	Berkshire Health Plan	H2212	6/86	N/A	--	--	--	IPA	NP	BC/MA	IPA	NP	BC/MA
MA	Community HP (Wing/Fer)	H2213	5/86	N/A	--	--	--	NETWORK	NP	CAP. AREA	IPA	NP	CAP. AREA
MA	Fallon Community Health Plan	H9001	4/85	N/A	GROUP	NP	--	GROUP	NP	--	GROUP	NP	--
MA	Central Mass. Health Care	H9025	4/85	N/A	IPA	NP	--	IPA	NP	--	IPA	NP	--
MA	Medical West Community HP	H9031-H2216	4/85	N/A	STAFF	NP	--	STAFF	NP	BC/MA	STAFF	NP	BC/MA
MA	Medical East Community HP	H9032	4/85	N/A	STAFF	NP	--	STAFF	NP	BC/MA	STAFF	NP	BC/MA
MI	HealthPlus	H9020-H2305	4/85	N/A	IPA	NP	--	IPA	NP	--	IPA	NP	BC HORIZ
MI	Greater Flint	H2307	1/86	N/A	--	--	--	STAFF	NP	BC MI	STAFF	NP	BC MI
MI	West Michigan	H2309	2/86	N/A	--	--	--	IPA	NP	BC MI	IPA	NP	BC MI
MI	Health Alliance	H2312	12/86	N/A	--	--	--	GROUP	NP	--	GROUP	NP	HFHCC
MI	McAuley	H2313	7/86	N/A	--	--	--	IPA	NP	--	IPA	NP	--
MI	BlueCare	H2314	7/86	N/A	--	--	--	IPA	NP	BC MI	IPA	NP	BC MI
MI	Health Central	H9009	4/85	N/A	STAFF	NP	--	STAFF	NP	BC MI	STAFF	NP	BC MI
MN	Medical Center - Duluth	H2402	1/86	N/A	--	--	--	GROUP	NP	AMER MED	GROUP	NP	PARTNERS
MN	HMO Minn. - Northeast	H2412	3/86	N/A	--	--	--	IPA	NP	BC MN	IPA	NP	BC MN
MN	HMO Minn. - Metro and Southeast	H9008-H2415 e	4/85	N/A	IPA	NP	--	IPA	NP	BC MN	IPA	NP	BC MN
MN	HMO Minn. - Duluth	H2418	3/86	N/A	--	--	--	IPA	NP	BC MN	IPA	NP	BC MN
MN	Medical Center - Moorehead	H2421	2/87	N/A	--	--	--	--	--	--	IPA	NP	PARTNERS
MN	PHP of Minnesota	H2430	2/86	N/A	--	--	--	IPA	NP	--	IPA	NP	UNITED
MN	MedCenters Health Plan	H9004	4/85	N/A	GROUP	NP	MEDCNTRES	GROUP	NP	AMER MED	GROUP	NP	PARTNERS
MN	Group Health Inc.	H9005	4/85	N/A	GROUP	NP	--	GROUP	NP	--	GROUP	NP	--
MN	Share	H9006	4/85	N/A	GROUP	NP	UNITED	GROUP	NP	UNITED	GROUP	NP	UNITED
MO	Sanus Health Plan	H2607	9/86	N/A	--	--	--	IPA	FP	SANUS	IPA	FP	SANUS
NE	Share Nebraska	H2802	10/85	N/A	IPA	FP	UNITED	IPA	FP	UNITED	IPA	FP	UNITED
NV	HP of Nevada - Las Vegas	H2931	6/85	N/A	GROUP	FP	SIERRA	GROUP	FP	SIERRA	GROUP	FP	SIERRA
NV	HP of Nevada - Reno	H2932-H2924	6/85	N/A	IPA	FP	SIERRA	IPA	FP	SIERRA	IPA	FP	SIERRA
NJ	OmniCare	H3130-H3111	8/86	N/A	--	--	--	STAFF	NP	--	STAFF	FP	--
NJ	HIP of NJ	H3133	9/86	N/A	--	--	--	GROUP	NP	--	GROUP	NP	HIP
NJ	CrossRoads, Foundation Hlth Plan as of 2/88	H9022	4/85	N/A	IPA	FP	--	IPA	FP	AMERCARE	IPA	FP	FOUNDATION
NM	Lovelace	H3201	8/85	N/A	GROUP	FP	HCA	GROUP	FP	HCA	GROUP	FP	EQUICOR
NM	FHP New Mexico	H3204	3/86	N/A	--	--	--	IPA	FP	FHP	IPA	FP	FHP
NY	Preferred	H3305	12/85	N/A	IPA	NP	--	IPA	NP	--	IPA	NP	--
NY	Rochester Health Network	H3309	8/86	N/A	--	--	--	NETWORK	NP	--	IPA	NP	--
NY	Blue Choice	H3310	5/86	N/A	--	--	--	IPA	NP	BC/ROCH	IPA	NP	BC/ROCH
NY	UsHealth Care Inc.	H3312	12/86	N/A	--	--	--	IPA	FP	USHCS	IPA	FP	USHCS
NY	Total Health	H3313	9/87	N/A	--	--	--	--	--	--	IPA	FP	--
NY	HIP NY	H3330	8/87	N/A	--	--	--	--	--	--	GROUP	NP	HIP
NY	Capital Area	H3332	9/85	N/A	STAFF	NP	--	STAFF	NP	CAP. AREA	STAFF	NP	CAP. AREA
NY	HCP/Buffalo	H3334	7/86	N/A	--	--	--	STAFF	NP	--	STAFF	NP	--
NY	Genesee Valley Grp. Hlth. Assoc.	H9014	4/85	N/A	GROUP	NP	--	GROUP	NP	BC/ROCH	GROUP	NP	BC/ROCH
NC	Kaiser of N.C.	H3401	5/86	N/A	--	--	--	GROUP	NP	KAISER	GROUP	NP	KAISER
ND	Medical Center - Fargo	H3504	2/87	N/A	--	--	--	--	--	--	IPA	FP	PARTNERS
OH	HMO Health Ohio	H3603	8/86	N/A	--	--	--	IPA	NP	BC	IPA	NP	BC
OH	Preferred Care	H3606	10/86	N/A	--	--	--	IPA	NP	BC	IPA	NP	BC
OH	Kaiser Ohio	H3607	12/86	N/A	--	--	--	GROUP	NP	KAISER	GROUP	NP	KAISER
OK	PruCare of Tulsa	H3704	9/86	N/A	--	--	--	GROUP	FP	PRUDENTIAL	GROUP	FP	PRUDENTIAL
OR	Pacificare, Secure Horizons as of 11/86	H3805	2/86	N/A	--	--	--	IPA	FP	PAC CARE	IPA	FP	PAC CARE

TABLE B.1

					1985 CHARACTERISTICS d			1986 CHARACTERISTICS d			1987 CHARACTERISTICS d		
STATE	PLAN NAME	GROUP HEALTH PLAN NUMBER(S) b	START DATE c	TERMINATE DATE	MODEL TYPE	PROFIT STATUS	CHAIN AFFIL.	MODEL TYPE	PROFIT STATUS	CHAIN AFFIL.	MODEL TYPE	PROFIT STATUS	CHAIN AFFIL.
PA	Greater Delaware Valley	H3902-H3932	12/85	N/A	IPA	FP	--	IPA	FP	--	IPA	FP	--
PA	HMO PA	H3931	11/85	N/A	IPA	NP	USHCS	IPA	FP	USHCS	IPA	FP	USHCS
PA	Hlth Amer. Corp. Phila. - Maxicare Philadelphia, 6/87	H3935	7/85	N/A	GROUP	FP	HLTH AMER	GROUP	FP	MAXICARE	GROUP	FP	MAXICARE
PA	HMO Western PA	H3936	2/86	N/A	--	--	--	GROUP	NP	--	GROUP	NP	USHCS
RI	RIGHA	H4131	3/86	N/A	--	--	--	GROUP	NP	--	GROUP	NP	--
TX	Humana	H4504	1/86	N/A	--	--	--	IPA	FP	HUMANA	IPA	FP	HUMANA
TX	Sanus HP - Dallas	H4507	12/86	N/A	--	--	--	IPA	FP	SANUS	IPA	FP	SANUS
TX	Sanus HP - Houston	H4508	5/86	N/A	--	--	--	IPA	FP	SANUS	IPA	FP	SANUS
TX	Share - Austin, Texas HPlans/Share as of 9/88	H4509	6/87	N/A	--	--	--	--	--	--	IPA	FP	UNITED
TX	PruCare of Houston	H4511	1/87	N/A	--	--	--	--	--	--	GROUP	FP	PRUDENTIAL
TX	Kaiser of Texas	H4530	8/87	N/A	--	--	--	--	--	--	IPA	NP	KAISER
WA	Network Health Plan	H5005	10/87	N/A	--	--	--	--	--	--	IPA	NP	--
WI	GHC - South Central Wisconsin	H5202-H5208	7/86	N/A	--	--	--	STAFF	NP	--	STAFF	NP	--
WI	FHP Coop.	H5205	3/86	N/A	--	--	--	STAFF	NP	--	STAFF	NP	--

All information was gathered from the OPHC reports which are produced monthly, April of 1985 through October of 1988.

a For the purpose of the analysis on disenrollments only TEFRA risk plans which were in operation as of December 31, 1987 are included. In addition, this table represents plans which had not terminated as of July 1, 1988.

b Group Health Plan Numbers include any changes that have been made in the plan identification numbers since April of 1985.

c Start dates were determined as the first month in which a plan recorded having enrollees in the OPHC monthly reports. These starting dates may differ slightly from the starting dates obtained from HCFA's Group Health Plan Operations Master File.

d Basic characteristics are as of year end for any particular year.

e The HMO Minnesota plans were originally assigned the following numbers:

H9008 was the plan identification number for HMO Minnesota (Metro and Southeast), which was an original DEMO plan.
H9008A = H2413, terminated 12/87
H9008B = H2412
H9008C = H2414, terminated 12/87
H9008 = H2415
H9008D = H2418
H9008E = H2420, terminated 12/87

TABLE B.2

CHARACTERISTICS OF HMOS ACTIVE THROUGH JULY 1988: CITY, TOTAL ENROLLMENT, MEDICARE ENROLLMENT, AND TEFRA CONTRACT INDICATOR

State Name	Plan Name	City	1985 Plan Characteristics			1986 Plan Characteristics			1987 Plan Characteristics		
			Total Members	Medicare Members	TEFRA Contract	Total Members	Medicare Members	TEFRA Contract	Total Members	Medicare Members	TEFRA Contract
AZ	FHP of Arizona	Phoenix	---	---	N	16,795	10,403	Y	26,619	10,172	Y
CA	*Peak Health Plan	Los Angeles	27,806	39	Y	32,105	2,529	Y	40,897	2,188	Y
CA	Children's Hospital	San Francisco	14,200	1,345	Y	20,100	5,611	Y	21,000	6,173	Y
CA	*National Med, Inc.		3,017	---	N	7,781	450	Y	13,589	803	Y
CA	Inland HP	Los Angeles	40,358	---	N	58,079	12,522	Y	?	19,092	Y
CA	Kaiser/Southern	Los Angeles	1,822,979	---	N	1,836,821	---	N	1,873,256	31,614	Y
CA	Bay Pacific	San Francisco	57,930	---	N	84,827	12,213	Y	95,250	12,365	Y
CA	*Secure Horizons	Los Angeles	127,417	9,962	Y	175,568	48,484	Y	220,276	66,106	Y
CA	Inter Valley	Los Angeles	24,106	---	N	36,094	3,793	Y	27,916	5,367	Y
CA	United Health Plan (Watts)	Los Angeles	57,075	6,552	Y	71,221	15,933	Y	53,744	13,131	Y
CA	FHP	Los Angeles	130,174	32,767	Y	147,295	50,368	Y	183,465	76,017	Y
CA	Healthcare	Sacramento	17,127	2,058	Y	17,078	1,946	Y	17,697	1,771	Y
CA	French Hospital (Health Plan)	San Francisco	15,200	3,972	Y	17,536	4,849	Y	17,500	4,506	Y
CO	HMO of Colorado, Denver	Denver	24,355	---	N	38,044	1,754	Y	55,362	1,639	Y
CO	Peak Health Plan Ltd. RC	Pueblo	---	---	N	39,811	4,999	Y	39,038	6,677	Y
CO	CompreCare, Inc.	Denver	76,474	---	N	106,634	1,535	Y	167,750	4,385	Y
CO	Kaiser Colorado	Denver	161,240	---	N	163,754	7,264	Y	180,459	14,694	Y
CT	Physician Health Services	Bridgeport	56,319	1,162	Y	74,369	2,638	Y	99,676	4,372	Y
FL	Health Options - Jacksonville	Jacksonville	10,182	---	N	74,337	1,926	Y	179,816	2,948	Y
FL	Network Health Plan (Health Care)	Miami	139	---	N	11,962	3,906	Y	13,404	6,485	Y
FL	Heritage (Health Plan of S. FL)	Miami	845	---	N	3,000	---	N	14,665	3,431	Y
FL	Florida HCP (Daytona)	Daytona	14,909	1,134	Y	17,995	4,997	Y	19,489	6,286	Y
FL	Humana - Jacksonville		---	---	N	893	3	Y	849	?	Y
FL	CAC(Comprehensive American Care)	Miami	60,239	11,276	Y	59,128	18,859	Y	56,728	18,379	Y
FL	AV-MED	Miami	93,207	6,822	Y	103,699	7,465	Y	90,396	8,412	Y
FL	Health Options of South Florida	Miami	19,440	1,410	Y	37,000	5,348	Y	?	12,296	Y
FL	*Humana Medical Plan	Broward	203,102	134,803	Y	172,973	131,673	Y	159,988	125,775	Y
FL	*Maxicare/HealthAmerica	Miami	20,500	2,956	Y	23,106	2,842	Y	24,256	2,610	Y
GA	Kaiser of Georgia		265	---	N	1,721	8	Y	14,539	162	Y
HI	HMSA - Honolulu	Honolulu	---	---	N	41,228	16,381	Y	36,839	19,215	Y
HI	Kaiser FHP - Honolulu	Honolulu	138,051	---	N	137,146	1,654	Y	148,772	8,367	Y
IL	Michael Reese Health Plan	Chicago	98,256	3,146	Y	128,319	7,961	Y	152,372	13,887	Y
IL	HMO Great Lakes (Healthwin)	Chicago	20,000	---	N	46,493	4,135	Y	60,000	3,400	Y
IL	HealthChicago	Chicago	15,268	---	N	60,000	8,637	Y	92,000	10,854	Y
IL	Anchor	Chicago	123,553	1,265	Y	133,500	4,706	Y	134,800	4,509	Y
IL	Share Illinois	Chicago	26,848	13,931	Y	38,903	18,539	Y	53,800	21,353	Y
IN	Key Health Plan	Indianapolis	23,355	---	N	70,476	2,315	Y	146,000	11,853	Y
IN	MetroHealth	Indianapolis	80,436	6,638	Y	78,679	7,731	Y	?	7,503	Y
IA	Share Iowa	Des Moines	23,562	1,584	Y	31,400	2,604	Y	32,500	2,890	Y
KS	HMO Kansas, Wichita	Wichita	---	---	N	3,431	1,312	Y	?	1,255	Y
KS	HMO Kansas, Topeka		32,550	---	N	50,966	741	Y	77,127	749	Y
KS	Health Care Plus, Wichita	Wichita	49,771	4,259	Y	58,863	5,349	Y	?	4,904	Y
KS	HMO Kansas, Kaw Valley		---	---	N	4,029	326	Y	?	479	Y
KS	HMO Kansas, South Central		---	---	N	50,966	870	Y	?	617	Y
MD	CareFirst		53,496	---	N	79,340	83	Y	100,318	310	Y
MD	HealthPlus	Washington, DC	21,600	240	Y	59,300	1,317	Y	85,819	1,571	Y
MD	Kaiser Mid-Atlantic		146,757	---	N	150,388	---	N	?	175	Y
MD	MD - IPA	Washington, DC	67,984	---	N	94,796	1,344	Y	106,000	1,383	Y
MA	Multigroup Health Plan		64,754	1,938	Y	?	3,825	Y	?	382	Y
MA	Tufts Assoc. Health Plan	Boston	56,917	1,524	Y	79,390	5,310	Y	101,926	3,997	Y

TABLE B.2 (Continued)

State Name	Plan Name	City	1985 Plan Characteristics			1986 Plan Characteristics			1987 Plan Characteristics		
			Total Members	Medicare Members	TEFRA Contract	Total Members	Medicare Members	TEFRA Contract	Total Members	Medicare Members	TEFRA Contract
MA	Harvard Community Health Plan	Boston	210,131	2,956	Y	305,541	4,142	Y	350,046	8,486	Y
MA	*Kaiser	Northhampton	24,177	---	N	26,490	1,336	Y	?	1,623	Y
MA	Bay State HC	Boston	130,162	---	N	176,470	2,442	Y	227,383	4,310	Y
MA	Community HP (Hillcrest)	Pittsfield	---	---	N	?	815	Y	?	1,023	Y
MA	Montachusett Health Plan	Worchester	6,916	741	Y	10,340	1,813	Y	11,415	1,869	Y
MA	Lahey Clinic	Boston	28,406	---	N	31,000	1,381	Y	31,511	1,333	Y
MA	Berkshire Health Plan	Pittsfield	---	---	N	14,700	1,128	Y	23,617	1,581	Y
MA	Community HP (Wing/Par)		---	---	N	?	421	Y	?	576	Y
MA	Fallon Community Health Plan	Worchester	66,201	10,144	Y	73,553	12,710	Y	84,994	13,988	Y
MA	Cantral Mass. Health Care	Worchester	60,000	4,819	Y	75,222	7,280	Y	91,014	4,852	Y
MA	Medical West Community HP	Springfield	85,494	4,477	Y	96,112	5,828	Y	11,043	5,708	Y
MA	Medical East Community HP	Boston	?	3,699	Y	?	4,719	Y	?	4,969	Y
MI	HealthPlus	Flint	127,718	6,108	Y	127,559	5,973	Y	108,942	5,943	Y
MI	Greater Flint HMO	Flint	26,500	---	N	32,768	1,111	Y	?	1,163	Y
MI	West Michigan HealthCare Network		60,512	---	N	87,523	880	Y	93,113	1,092	Y
MI	Health Alliance(Plan of Michigan)	Detroit	179,048	---	N	207,436	47	Y	255,054	7,876	Y
MI	McAuley	Ann Arbor	14,357	---	N	33,616	1,107	Y	68,500	2,303	Y
MI	BlueCare	Lansing	---	---	N	174,246	19,329	Y	197,724	14,163	Y
MI	Health Central	Lansing	49,773	2,983	Y	55,151	3,412	Y	63,100	1,330	Y
MN	Medical Canter Duluth	Duluth	---	---	N	?	6,730	Y	?	7,780	Y
MN	HMO Minn. - Northeast	Grand Rapids	---	---	N	?	1,791	Y	?	1,721	Y
MN	HMO Minn. Metro and Southeast	Minneapolis	?	16,757	Y	63,577	4,231	Y	48,691	4,399	Y
MN	HMO Minn. Duluth	Duluth	---	---	N	?	3,717	Y	?	3,589	Y
MN	Medical Canter - Moorhead	NW Minnesota	---	---	N	---	---	N	?	2,359	Y
MN	PHP of Minnesota	Minneapolis	---	---	N	156,825	47,108	Y	154,800	57,909	Y
MN	MedCanters Health Plan	Minneapolis	212,669	11,881	Y	244,409	15,955	Y	271,148	12,513	Y
MN	Group Health Inc.	Minneapolis	213,245	5,996	Y	188,460	8,758	Y	177,627	12,858	Y
MN	Share	Minneapolis	131,107	35,469	Y	156,300	41,930	Y	168,100	43,649	Y
MO	Sanus Health Plan	St. Louis	21,580	---	N	43,361	575	Y	81,210	1,422	Y
NE	Share Nebraska	Omaha	16,660	1,774	Y	26,100	3,278	Y	26,600	3,796	Y
NV	HP of Nevada - Las Vegas	Las Vegas	48,453	5,103	Y	63,021	10,466	Y	62,722	9,654	Y
NV	HP of Nevada - Reno	Reno	22,521	2,206	Y	30,927	4,119	Y	38,983	3,609	Y
NJ	OmniCare	Vineland	19,000	---	N	20,700	2,005	Y	21,466	2,740	Y
NJ	HIP of New Jersey	Paramus	---	---	N	?	588	Y	?	1,735	Y
NJ	*Foundation Health Plan		?	476	Y	27,432	566	Y	30,282	591	Y
NM	Lovelace	Albuquerque	60,711	3,111	Y	70,000	4,928	Y	77,592	807	Y
NM	FHP New Mexico	Albuquerque	---	---	N	12,174	5,047	Y	18,911	8,132	Y
NY	Preferred	Rochester	83,278	32	Y	108,000	6,322	Y	108,300	4,903	Y
NY	Rochester Health Network		57,623	---	N	82,311	338	Y	42,705	750	Y
NY	Blue Choice	Rochester	64,400	---	N	120,000	3,732	Y	206,203	7,604	Y
NY	US Health Care Inc.		---	---	N	9,896	59	Y	43,460	100	Y
NY	Total Health HMO Inc., Great Neck		---	---	N	395	---	N	10,438	796	Y
NY	HIP NY (of Greater New York)	New York	---	---	N	905,940	---	N	889,900	9,044	Y
NY	Capital Area	Albany	85,743	525	Y	66,364	1,532	Y	72,703	2,501	Y
NY	HCP/Buffalo	Buffalo	55,563	---	N	60,000	664	Y	59,986	2,523	Y
NY	Genesee Valley Grp. Health Assoc.	Rochester	42,965	5,975	Y	45,301	7,055	Y	53,723	7,570	Y
NC	Kaiser of North Carolina	Char/Raleigh	11,479	---	N	28,328	389	Y	61,190	1,190	Y
ND	Medical Canter - Fargo		530	---	N	9,631	---	N	34,348	559	Y
OH	HMO Health Ohio	Cleveland	60,126	---	N	86,865	807	Y	102,665	1,846	Y
OH	Preferred Care	Cleveland	---	---	N	?	553	Y	?	2,245	Y
OH	Kaiser Ohio	Cleveland	154,681	---	N	157,915	51	Y	177,181	3,498	Y
OK	PruCare of Tulsa		24,645	---	N	27,349	188	Y	31,479	732	Y
OR	*Secure Horizons	Portland	2,710	---	N	14,185	6,012	Y	18,000	9,540	Y
OR	Kaiser - North West	Portland	286,342	10,310	Y	291,436	18,675	Y	318,564	27,001	Y
PA	Greater Delaware Valley		38,675	4	Y	40,655	135	Y	68,051	90	Y
PA	HMO PA	Philadelphia	388,897	5,025	Y	435,260	16,452	Y	490,665	15,071	Y

TABLE B.2 (Continued)

State Name	Plan Name	City	1985 Plan Characteristics			1986 Plan Characteristics			1987 Plan Characteristics		
			Total Members	Medicare Members	TEFRA Contract	Total Members	Medicare Members	TEFRA Contract	Total Members	Medicare Members	TEFRA Contract
PA	*Maxicare Philadelphia	Philadelphia	36,695	1,602	Y	38,662	2,130	Y	37,086	2,158	Y
PA	HMO Western PA	Pittsburgh	10,000	---	N	12,023	2,605	Y	13,888	2,931	Y
RI	RIGHA	Providence	62,783	---	N	75,565	2,791	Y	88,903	4,275	Y
TX	Humana	Corpus Christi	17,531	---	N	24,778	1,707	Y	24,178	2,441	Y
TX	Sanus HP - Dallas		21,265	---	N	44,678	10	Y	73,438	319	Y
TX	Sanus HP - Houston	Houston	15,123	---	N	50,000	845	Y	49,005	1,372	Y
TX	*Texas HPlans/Share		1,344	---	N	4,100	---	N	8,400	199	Y
TX	PruCare of Houston	Houston	128,735	---	N	137,617	---	N	159,105	1,111	Y
TX	Kaiser of Texas	Dallas	57,300	---	N	51,008	---	N	55,332	1,007	Y
WA	Network Health Plan		16,979	---	N	---	---	N	44,135	196	Y
WI	GHC - South Central Wisconsin		32,071	---	N	39,362	106	Y	42,399	238	Y
WI	FHP Coop.	Milwaukee	48,175	---	N	52,772	1,869	Y	61,634	3,978	Y

DATA SOURCES: OPHC Reports (Medicare Members), InterStudy Edge and Annual Reports 1985-1988 (Total Members)

NOTES FOR TABLE B.2:

* The plan's name changed at some point in time. The current plan name is indicated; Table B.1 contains an indication of the previous plan name.

Main market area city is only indicated for HMOs with more than 1,000 members in January 1988.

APPENDIX C

COHORT-BASED DISENROLLMENT RATES VERSUS TIME-RELATED RATIOS

COHORT-BASED RATES VERSUS TIME RELATED RATIOS

Throughout Chapter III, cohort rates are used to calculate disenrollment rates from risk HMOs. This cohort rate, referred to in this report as the disenrollment rate (DR), is calculated as:

$$DR_{ijt} = \frac{\#\ \text{Disenrollees}_{ijt}}{\#\ \text{Enrollees}_{ij}}$$

where

i = the enrollment cohort of interest

j = the HMO or CMP in which the individual is enrolled

t = the number of months of enrollment duration; t_1 = 3 months, t_2 = 6 months, t_3 = 12 months, and t_4 = 24 months, where t_2, t_3, and t_4 are cumulative rates.

Throughout the analyses in this report, the denominator for the cohort remains constant, while the numerator increases over time as cohort members disenroll. Enrollees who died during the period which a disenrollment rate is being calculated are excluded from both the numerator and the denominator.

As was noted in Section A of Chapter III, it would be possible to calculate time-related ratios as an alternative. The monthly disenrollment ratios (MDRs) as calculated by HCFA are derived from the following formula:

$$MDR_{jt} = \frac{\#\ Disenrollees_{jt}}{(\#\ Enrollees\ _{jt-1}) + (\#\ Enrollees\ _{jt})}$$

where

j = the specific HMO or CMP

t = month of the year

It is useful to explore in more depth, as background to the data presented in Chapter III, the implications of the difference between these two alternative methods for calculating disenrollment rates. In this Appendix, two hypothetical cases are used to illustrate the problems of interpretation of disenrollment rates, when alternative methodologies are used.

1. Hypothetical Cases

Consider an HMO that commences enrollment at the beginning of a certain year. Assume that 10 percent of all new enrollees subsequently disenroll, and that all of this disenrollment takes place in the third month after enrollment. Thus, in this model, the 3-month and 12-month cohort disenrollment rates are both equal to 10 percent, and the 1-month disenrollment rate is zero. This occurs because of the rigid assumptions of this model. Since all disenrollment is assumed to take place in the third month after enrollment, the same proportion of enrollees disenrolls within 1 year as disenrolls within 3 months. The 1-month disenrollment rate is zero because no one disenrolls within 1 month.

Assume also that the HMO enrolls 100 people in the first month and that new enrollees increase at a rate of 100 per month in perpetuity. These data are shown in Table A.1, which also includes monthly, quarterly, and annual disenrollment ratios based on these figures. The annual disenrollment ratio is 5.8 percent, which is considerably below the 12-month cohort disenrollment rate of 10 percent. The quarterly ratios vary between zero and 3.4 percent, again reflecting an underlying 3-month disenrollment rate of 10 percent. The monthly ratios range from 0 to 1.5 percent, peaking in July and declining steadily thereafter.

Table A.2 presents similar information for a second scenario. In this scenario, the disenrollment rate assumptions are identical to the assumptions in the previous example. However, in this second case, assume that the HMO enrolls 1,500 people in the first month and that new enrollees decrease at a constant rate of 100 per month thereafter. The annual disenrollment ratio is 8.6 percent, with quarterly disenrollment ratios ranging from zero to 5.6 percent, and monthly ratios ranging from 1 to 2.8 percent. The monthly ratio peaks in April and declines steadily for the rest of the year.

2. Discussion

It is clear from these simple examples that a constant underlying disenrollment rate is consistent with very different values and patterns of disenrollment ratios. For example, in the first scenario in which the number of new enrollees per month is increasing, monthly ratios would lead to the inference that disenrollment increases from April to July and decreases thereafter. In the second scenario, however, with new enrollees per month decreasing, the disenrollment ratio declines steadily from April onwards. It is tempting to conclude that disenrollment is "improving" when, in fact, the underlying rate is constant. Furthermore, the disenrollment patterns during the year appear to differ greatly in the two scenarios, but the rates are actually identical. Similarly, in contrasting the annual ratios, one might conclude that disenrollment is "worse" in the second scenario than in the first, even though the 12-month rates are the same.

From this analysis, it is apparent that caution must be used when drawing inferences based upon time-related ratios or cohort-based rates. Both measures have utility, but they measure different things, as discussed in Chapter III. In particular, however, drawing inferences from ratios about underlying disenrollment trends may be misleading, because variations in the ratio over time are critically dependent on both enrollment and disenrollment patterns.

TABLE A.1

HYPOTHETICAL EXAMPLE OF DISENROLLMENT PATTERNS WITH A CONSTANT 10 PERCENT 3-MONTH RATE, AND NEW ENROLLEES INCREASING AT A RATE OF 100 PER MONTH

Month	New Enrollees	Disenrollees	Total Enrollees at End of Month	Monthly Disenrollment Ratio (%)	Quarterly Disenrollment Ratio (%)	Annual Disenrollment Ratio (%)
Jan	100	0	100	0		
Feb	200	0	300	0	0	
Mar	300	0	600	0		
Apr	400	10	990	1.0		
May	500	20	1,470	1.3	2.9	
June	600	30	2,040	1.4		5.8
July	700	40	2,700	1.5		
Aug	800	50	3,450	1.4	3.4	
Sept	900	60	4,290	1.4		
Oct	1,000	70	5,220	1.3		
Nov	1,100	80	6,240	1.3	3.2	
Dec	1,200	90	7,350	1.2		

TABLE A.2

HYPOTHETICAL EXAMPLE OF DISENROLLMENT PATTERNS WITH A CONSTANT 10 PERCENT 3-MONTH DISENROLLMENT RATE, AND NEW ENROLLEES DECREASING AT A RATE OF 100 PER MONTH

Month	New Enrollees	Disenrollees	Total Enrollees at End of Month	Monthly Disenrollment Ratio (%)	Quarterly Disenrollment Ratio (%)	Annual Disenrollment Ratio (%)
Jan	1,500	0	1,500	0		
Feb	1,400	0	2,900	0	0	
Mar	1,300	0	4,200	0		
Apr	1,200	150	5,250	2.8		
May	1,100	140	6,210	2.2	5.6	
June	1,000	130	7,080	1.8		8.6
July	900	120	7,860	1.5		
Aug	800	110	8,550	1.3	3.8	
Sept	700	100	9,150	1.1		
Oct	600	90	9,660	0.9		
Nov	500	80	10,080	0.8	2.3	
Dec	400	70	10,410	0.8		

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